1983 TEXAS INTERNATIONAL FISHING TOURNAMENT: AN ANALYSIS OF PARTICIPANTS' CHARACTERISTICS, ATTITUDES AND EXPENDITURES

Robert B. Ditton and David K. Loomis Department of Recreation and Parks Texas A&M University College Station, Texas 77843 TAMU-SG-85-202 April 1985 \$3

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Robert B. Ditton and David K. Loomis

Texas Agricultural Experiment Station
(Recreation and Parks)

Texas A&M University

College Station, Texas 77843

April 1985

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ABSTRACT

The 45th Annual Texas International fishing Tournament was held August 3-7, 1983 at South Padre Island, Texas and attracted 446 adult (17 years or older) fishermen. This included 358 anglers in the offshore division and 88 in the bay division. Tournament participants were sent a mail questionnaire one week after the tournament, and if necessary, there was a second mailing and phone call. Sixty-one percent of fishermen in the bay division and 46 percent of fishermen in the offshore division responded, resulting in a total response of 49 percent. Telephone interviews were conducted with a sample of 32 non-respondents. Results were used to correct survey findings for non-response bias.

Most of the participants were active male fishermen and held professional-technical positions (average age was 38 years old).

Offshore division participants tended to have higher household incomes, larger boats, fished less frequently and spent more money annually to fish than bay division participants. The four most important reasons for tournament fishing reported by participants in both divisions were: for the challenge or sport, to escape from the regular routine, for the experience of the catch and to relax.

Total direct purchases associated with the tournament were estimated to be about \$449,000 (excluding tournament fees) -- just under \$41,000 by bay division participants and \$409,000 by offshore division

anglers. Of the approximately \$41,000 expended by bay division fishermen, about \$500 was spent in the South Padre Island area by the two out-of-state participants. Nine out-of-state participants accounted for more than \$15,000 of the \$409,000 spent by offshore division competitors. Including re-spending effects, the \$15,350 spent by out-of-state tournament fishermen resulted in an economic impact of more than \$41,000 on the state of Texas.

Results indicate the tournament was economically successful in that it produced substantial impacts on the local economy. Impacts on Cameron County resulting from expenditures by the 11 out-of-state and 261 out-of-county participants in the South Padre Island area were considerably greater than statewide impacts. Combined, these non-residents spent more than \$274,000, resulting in an economic impact of \$561,000. The local economy realized the greatest benefits in the fuel, dining and lodging sectors. These are conservative estimates since there were additional impacts associated with the re-spending of tournament registration fees paid by non-Cameron County anglers. The majority of the \$40,400 collected in tournament fees was reportedly re-spent in Cameron County for entertainment, advertising, printing and data analysis services.

ACKNOWLEDGEMENTS

This study was funded by the Marine Advisory Service of the Texas A&M University Sea Grant College Program and partially supported by the Texas Agricultural Experiment Station. Numerous individuals contributed to the completion of this report. Darrell Freeman was responsible for the data collection and initial computer analysis. Stephen Holland, Richard Christian and Raymond Bartley, all members of the Marine Recreation Research Lab staff, assisted with follow-up phone calls. Stephen Holland also provided much appreciated assistance with question design and data analysis. Hope Peart made necessary typing additions and Rai Freeman participated in organizing the survey mail-outs.

Appreciation is extended to Tony Reisinger and the staff of the Cameron County Agricultural Extension Office for their help with the survey mail-out and liaison with the TIFT board of directors.

A sincere thanks is given to the members of the Texas International Fishing Tournament Inc. Board of Directors, and especially to Executive Director Mary Lou Campbell, for their cooperation and assistance in making this study possible. Finally, we would like to thank the TIFT fishermen who contributed their time and survey responses. We hope this report gives them an opportunity to better understand their fellow tournament fishermen and the impact of their expenditures.

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INTRODUCTION

Approximately 60 saltwater fishing tournaments were open to the public along the Texas coast in 1983 (Christian, 1984). Other saltwater fishing tournaments were held only for members of private clubs and organizations. Some tournaments were based on one particular fishing type, such as surf fishing, or on one fish species such as red drum (Sciaenops ocellatus). Other tournaments focused on inshore or offshore species only. Other tournaments, usually the larger ones, did not focus on one fishing type, one species, or a group of species but included a variety of divisions.

This report examines the economic impact of the 45th annual 1983

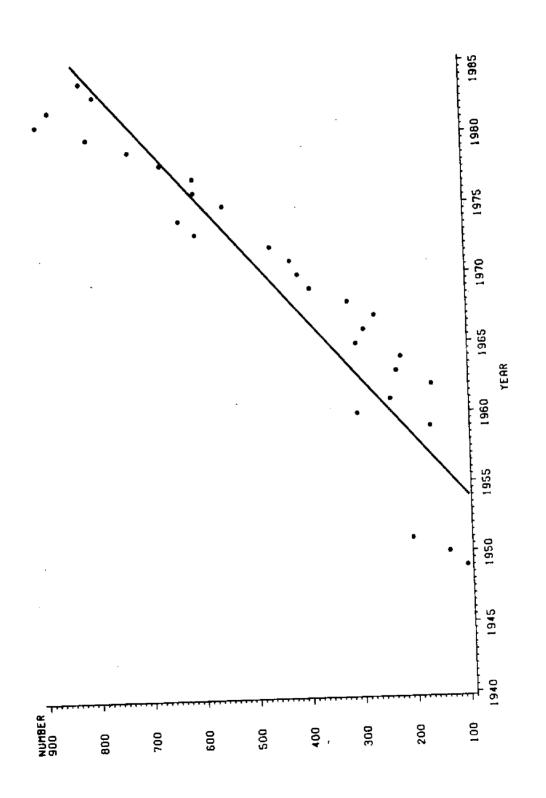
Texas International Fishing Tournament (TIFT) held on August 3-7 at

South Padre Island, Texas. The popularity and demand for sportfishing tournaments in Texas is evidenced by the growth of this tournament. In 1979, 300 anglers participated in TIFT. By 1983, registration had grown to 587. When social (non-fishing) and boatmen division participants are included, that rises to 826. Figure 1 provides trend data on participation in the TIFT since 1949.

This study identifies the expenditures and economic impacts resulting from the 1983 TIFT tournament and describes the socio-economic characteristics of tournament fishermen.

This is the first economic impact study of a saltwater fishing tournament in Texas. Many groups and organizations should find the

Figure 1: Number of Registered Participants in the Texas International Fishing Tournament 1949-1983



results of this study useful. TIFT officials can use the local economic impact estimate to determine the benefit-cost ratio of their tournament by weighing the participants' expenditures in the local area against the total costs involved in holding the event. Tournament sponsors can apply knowledge of the extent of expenditures by various groups of participants, i.e., offshore and bay fishermen, to enhance the economic impact of future tournaments. A socio-economic characterization of tournament fishermen will allow businesses to better understand potential customers and their wants and needs so that more effective marketing strategies may be developed. Knowledge of the socio-economic characteristics may also be useful to the promotion and operation of future tournaments. By examining the economic impacts of this tournament on Cameron County and the state of Texas the benefit of tourism/recreation-related events such as tournaments may be demonstrated to government agencies and private sector supporters. Results of this study may also be useful to other communities and organizations in determining the benefits of holding their own events.

Literature Review

Tourism in coastal communities can result in significant economic impacts due to re-spending of new monies brought into the area. A region's economic base can be substantially increased as a result of expenditures made by non-residents (Devanney et al., 1976; Daniel, 1974). Most economic impact studies have been carried out to provide estimates of the overall tourism industry, but few studies have been performed for short-duration events which also produce significant economic impacts.

A study of the Bethany-Fenwick Chamber of Commerce Annual Surf Fishing Tournament estimated the two-day event attracted 265 participants and produced an economic impact of \$25,264 for Sussex County and \$34,500 for the State of Delaware (Rockland and Falk, 1982).

The 1981 Milford World Championship Weakfish Tournament, Delaware, attracted about 440 fishermen for each of three days fishing (Falk et al., 1981). The tournament resulted in an estimated economic impact of \$137,000 on the surrounding counties.

Approximately 2,355 participants with 515 boats registered to compete in the 1981 First Annual Greater Jacksonville Natural Light Kingfish Tournament (Milon et al., 1982). Tournament fishermen expenditures during the three-day event produced an estimated economic impact of \$700,203 on the local Florida county. A follow-up study estimated that the Second Annual Greater Jacksonville Natural Light Kingfish Tournament produced a \$642,000 local economic impact (Ellerbrock et al., 1983).

An estimated 1,844 anglers participated in the Third Annual Arthur Smith King Mackerel Tournament in Little River, South Carolina and spent an estimated \$650,000 (Smith and Moore, 1980). Those fishermen brought an additional 4,740 family members or friends whose expenditures during the two-day event increased the impact by an estimated \$229,000, bringing the total to \$879,000.

In addition to the economic impact of planned, short-duration events, year-round tourism activity provides significant economic impact to coastal regions. Marine recreational fisheries with associated support industries are a significant component of coastal tourism.

Fishermen spend substantial amounts of money to participate in their favorite sport. Besides the obvious necessary items such as rods, reels and tackle, much is spent on lodging, travel, restaurants, entertainment and other goods and services. In 1980, more than 13.3 million saltwater anglers 12 years or older in the U.S. spent more than \$3.6 billion for fishing (U.S. Fish and Wildlife Service, 1982). Each sportsman spent an average of approximately \$200 per year. An economic impact study of recreational boat fishermen in the Houston-Galveston area of the Texas coast estimated this population of fishermen spent more than \$31 million for their fishing trips in 1978, with bay fishermen spending \$26,460,000 and offshore fishermen spending \$5,046,000 (Ditton et al., 1980). Individual bay and offshore fishermen spent an average of \$15 and \$21, respectively for a typical outing. The total direct and indirect economic impact of saltwater boat fishing trips in this eight-county region was estimated at \$79,751,000.

Objectives

The objectives of this study are:

- To describe the socio-economic characteristics, general fishing habits, tournament fishing motivations and expenditures of the participants.
- To estimate the economic impact of the 1983 Texas International Fishing Tournament on Cameron County and the State of Texas.
- To outline strategies to enhance the local economic impact of the Texas International Fishing Tournament.

METHODS

Data collection was accomplished with a mail survey of participants entered in particular divisions of the 1983 Texas International Fishing Tournament. Fishermen could register for the tournament in one of four divisions, each with a junior (16 years and under) sub-division. The divisions were: 1) Offshore, 2) Bay, 3) Surf and 4) Tarpon. There were also two non-fishing categories -- social and boatman. The 141 junior and 239 non-fishing division participants were not included in the study as it was assumed their expenditures were included in the responses of participants surveyed. In previous tournaments it was found nearly all of the non-fishing registrants were family and/or friends of fishing participants (Campbell, 1983). Family members of adult fishing participants accounted for more than 75 percent of the junior division fishermen in this survey. The remaining participants were local children and therefore their expenditures were of little consequence.

A questionnaire was mailed to each adult participant in each division. With the questionnaire, each fishermen was mailed a cover letter describing the intent of the survey, and a stamped, self-addressed return envelope (Appendices A,B). A second questionnaire was mailed to fishermen who had not responded within 14 days.

Tournament participants who had not responded after 28 days were contacted by telephone and urged to return a completed questionnaire. A third questionnaire was mailed to fishermen if necessary. At least

three attempts were made to contact each non-respondent by telephone. All survey materials were sent by first-class mail. The survey instrument was designed in consultation with Texas A&M Marine Advisory. Service personnel and TIFT officials. In addition, it contained items used in previous studies of fishermen on the Texas coast (Ditton and Holland, 1983; Ditton and Fedler, 1983; Ditton et al., 1980). Each participant was asked to estimate individual expenditures for items such as fishing tackle, snack foods and beverages, bait, ice, and gas and oil. Participants were asked also to estimate group expenditures for lodging and restaurants to account for family members and friends not surveyed.

Participants were asked their age, gender, occupation, and income, and about their year-round fishing activity, methods and expenditures.

Tournament fishermen were also questioned about their level of satisfaction with the tournament, their likes and dislikes, how the tournament could have been improved and how they learned about the TIFT.

Means, medians and standard deviations were calculated for all variables. Chi-square analyses were performed to test for significant differences between bay and offshore division respondents on all variables except expenditures for equipment and fishing motives, where t-tests were performed.

About 50 percent of the questionnaires were returned in useable form (Table 1). A higher response was achieved from bay division participants (61.4 percent) than from the offshore participants (46.4 percent). An insufficient response from the surf (0 of 2) and tarpon (2 of 2) divisions does not allow for any meaningful analyses of their

participants. The remainder were non-respondents for a variety of reasons. Sixteen questionnaires were returned as undeliverable by the U.S. Postal Service.

Table 1. Status of Tournament Questionnaire Response

		Divi	sion			
Type of		Вау	Offshore		Total	
Response	N	*	N	*	N	*
Useable	54	61.4	166	46.4	220	49.3
Non-Response						
Non-Deliverable	3	3.4	10	2.8	13	2.9
Not Returned	31	35.2	182	50.8	213	47.8
Total Non-Response	34	38.6	192	53.6	226	50.7
Totals	88	100.0	358	100.0	446	100.0

Since the survey obtained information from 220 of the 446 tournament fishermen, study results could possibly be biased if respondents differed significantly from non-respondents. Therefore, it was necessary to represent the fishermen who did not return a questionnaire in order to estimate the Tournament's total economic impact. To avoid a non-response bias, a sample of 32 non-respondents (25 offshore division participants, 7 bay division participants) were contacted by telephone. The non-response interview did not obtain all the information sought in the mail questionnaire but covered some key

variables and spending patterns of participants during the tournament (Appendix C). The interviews indicated bay division non-respondents were slightly less likely to own a boat (71%) than respondents (91%). Non-respondents in the bay division fished in saltwater fewer days annually (Mean = 51 days) than survey respondents (Mean = 99). In addition, non-respondents who competed in the bay division tended to spend less than respondents for particular items.

Conversely, offshore division non-respondents were, on the average, less active in terms of annual days saltwater fishing (Mean = 56) than offshore division survey respondents (Mean = 84). Offshore division respondents spent more than non-respondents to participate in the tournament.

These biases were corrected by weighting spending patterns of respondents and non-respondents according to their respective proportions of the total group of fishermen in each division. Expenses incurred by non-respondents and respondents in the bay and offshore divisions were calculated separately and combined to provide an estimate of the total expenditures associated with the tournament. Expenditure figures in the text usually represent the combined expenses of both respondents and non-respondents; data for expenditures by non-respondents only is presented in Appendix D.

RESULTS

Tournament Fishing Participation

A total of 446 adult (17 years or older) fishermen registered to fish in the tournament. The offshore division attracted 358 participants and the bay division 88. Most of the respondents in both the offshore (87 percent) and bay (89 percent) divisions fished all three days of the tournament.

Although 96 percent of the participants came from Texas, residents from other states (Louisiana, Oklahoma, Florida, Kentucky, Arizona, Alabama, Indiana and Wyoming) and Australia registered to fish in the tournament. All but two of the out-of-state fishermen entered the offshore division.

Although a majority of the bay division participants (59 percent) resided in Cameron County, Texas, a larger majority of the offshore division competitors (63 percent) came from Texas counties other than Cameron (Table 2).

A majority of the competitors in both divisions traveled less than 100 miles to compete in the event. However, a much larger percentage of bay participants (87 percent) than offshore competitors (61 percent) came from within the 100-mile zone (Figure 2). Twelve percent of the offshore fishermen came from distances greater than 400 miles and 11 percent came from areas between 100-200 miles, reflecting the influence of the Dallas-Fort Worth and Corpus Christi metropolitan areas, respectively (Table 3). Among bay division fishermen who traveled more than 100 miles to compete in TIFT, the largest percentage began their

Table 2. Frequency Distributions of the Location of Respondents'
Residence by Tournament Division

Location	Ва	ıy	Offshore			
of Residence	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)		
Cameron County	32	59.3	57	34.3		
Texas (outside Cameron Co)	21	38.9	105	63.3		
Other	1	1.8	4	2.4		
Missing	0		0			
Totals	54	100.0	166	100.0		

Chi-square = 10.53

Significant at .05 level

trips from within the 300-400 mile range where Austin and Houston are located.

Year-round tournament participation varied between bay and offshore divisions. A greater percentage of offshore anglers (13 percent) than bay fishermen (7 percent) had never fished in a tournament before (Table 4). About 61 percent of the bay division respondents and 66 percent of the offshore anglers entered a tournament more than once a year.

Most respondents in both the offshore and bay divisions had fished in the TIFT less than 10 times before, and the largest percentage fished in the event between one and five times previously (Table 5).

Respondents were asked how they first learned about the Texas

International Fishing Tournament. Although most of the fishermen in
both divisions found out about the tournament through friends, others

Figure 2: Concentric Travel Zone Map of Texas

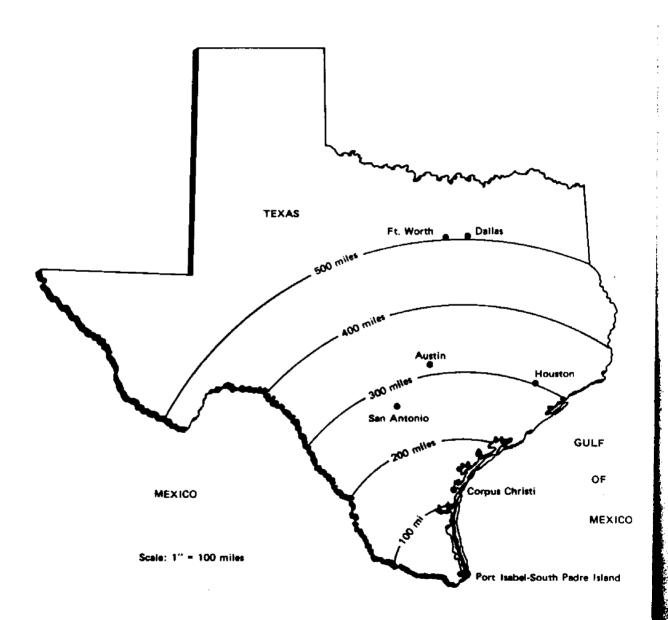


Table 3. Frequency Distributions of Miles Respondents Traveled to Compete in TIFT by Tournament Division

	Ba	ву	Offshore			
Miles traveled	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted freq.(PCT)		
0-100	47	87.3	101	60.8		
101-200	1	1.8	19	11.4		
201-300	2	3.6	12	7.2		
301-400	3	5.5	14	8.4		
401-500	1	1.8	14	8.4		
500+	0	0.0	6	3.6		
Totals	54	100.0	166	99.8		

Chi-square = 15.02

Significant at .05 level

Table 4. Frequency Distributions of Tournament Participation by Division

	Ва	у	Offshore			
Tournaments entered	Absolute frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)		
First year	4	7.4	21	12.7		
Every 2-3 years	4	7.4	1	0.6		
Once a year	13	24.1	34	20.5		
More than once a year	- 33	61.1	110	66.3		
No response	0		. 0			
Totals	54	100.0	166	100.1		

Chi-square = 9.70

Significant at .05 level

Table 5. Frequency Distributions of the Number of Previous Times
Participants Had Fished in TIFT by Tournament Division

	Ва	ıy	Offshore			
Number of times	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)		
0	10	18.5	34	20.6		
1-5	30	55.6	-	43.6		
6-10	11	20.4	72 38	23.0		
11+	3	5.6	21	12.7		
No response	Ö		1			
Totals	54	100.1	166	99.9		

Chi-square = 5.83

Not significant at .05 level

learned of the tournament by means of radio, TV and newspaper advertisements.

About 76 percent of the offshore and 69 percent of the bay division participants brought at least one additional non-competing family member or friend to the tournament (Table 6). Between three and four additional persons were brought by 22 percent of the bay anglers and 28 percent of the offshore fishermen.

The greatest percentage of bay (57 percent) and offshore (48 percent) respondents spent three to four nights in the Port Isabel-South Padre Island area (Table 7). The median number of nights spent by bay and offshore respondents was 4.5 and 5.7, respectively.

A variety of types of lodging were utilized by participants during the tournament including condominiums (both owned and rented), motels/hotels, trailers, boats and, for some, their own homes. The

Table 6. Frequency Distributions of the Number of Additional Persons
Participants Brought to TIFT by Tournament Division

	Ва	y	Offshore			
Number of Additional Persons	Absolute Frequency	Adjusted Freq.(PCT)	Absolute frequency	Adjusted Freq.(PCT)		
0	17	31.5	39	23.6		
1-2	22	40.7	51	30.9		
3-4	12	22.2	46	27.9		
5+	3	5.6	29	17.6		
No response	0		ĩ			
Totals	54	100.0	166	100.0		

Chi-square = 7.65

Not significant at .05 level

Table 7. Frequency Distributions of the Number of Nights Participants Stayed in the South Padre Island Area by Tournament Division

	Ва	ıy	Offshore			
Number of nights	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)		
0	2	4.3	0	0.0		
1-2	2	4.3	5	3.3		
3-4 5-6	26	56.6	73	48.ó		
5-6	12	26.1	43	28.3		
7+	4	8.7	31	20.4		
Missing	8		14	= =		
Totals	54	100.0	166	100.0		

Chi-square = 1.33

Not significant at .05 level

largest proportion of bay fishermen stayed in a motel/hotel (23 percent) or rented a condominium (21 percent) while most offshore fishermen rented a condominium (26 percent) or a trailer (18 percent) (Table 8).

Table 8. Frequency Distributions of the Type of Lodging Used by TIFT Participants in the South Padre Island Area by Tournament Division

	Ва	iy	Offshore		
Type of Lodging	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)	
Condominium-Rented	11	21.2	41	25.6	
Motel or Hotel	12	23.1	22	13.8	
Trailer	8 8	15.4	28	17.5	
Own Home	8	15.4	16	10.0	
House-Rented	1	1.9	4	2.5	
Condominium-Owned	8	15.4	17	10.6	
Boat	1	1.9	15	9.4	
House-Owned	2	3.8	9	5.6	
Home of friend	ī	1.9	8	5.0	
No response	2	- -	6 .		
Totals	-54	100.0	166	100.0	

Chi-square = 8.37

Not significant at .05 level

Demographic Characteristics

Respondents ranged in age from 17 to 72 years in the offshore division and from 22 to 64 years of age in the bay division (Table 9). There was no significant difference in age between offshore and bay fishermen; average ages were 39 and 37 years, respectively.

Tournament participants were predominantly male in both divisions.

Nine percent of the bay fishermen and 7 percent of the offshore

registrants were female.

Table 9. Frequency Distributions of Respondent Age by Tournament Division

Age	Ba	ıy	Offshore		
	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)	
17-27	8	14.8	26	15.8	
28-37	25	46.3	51	30.9	
8-47	14	25.9	51	30.9	
48-57	4	7.4	25	15.2	
58-67	3	5.6	9	5.4	
68-72	Ö	0.0	3	ī.8	
No Response	0		ĺ	÷ •	
Totals	54	100.0	166	100.0	

Chi-square = 2.64

Not significant at .05 level

A majority of the fishermen in both bay (52 percent) and offshore (58 percent) divisions were employed in professional-technical occupations (Table 10).

A significant difference in income levels was found between the participants in the two divisions (Table II). The median annual household income of bay division anglers was between \$30,000 and \$39,999, and between \$60,000 and \$69,999 for offshore participants.

Table 10. Frequency Distributions of Occupation Categories of Respondents by Tournament Division

	Ва	ıy	Offshore		
Occupation	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)	
Prof-Tech-Sales	28	51.9	95	57.9	
Skilled-Semi-skilled	11	20.4	25	15.2	
Self Employed	7	13.0	19	11.6	
Clerical	3	5.6	1	0.6	
Farmer	3	5.6	4	2.4	
Manager	2	3.7	11	6.7	
Student	0	0.0	6	3.7	
Retired	0	0.0	2	1.2	
No Response	0		2		
Unemployed	0	0	1	.6	
Totals	54	100.2	166	99.9	

Chi-square = 11.20

Not significant at .05 level

Table 11. Frequency Distributions of Income Categories of Respondents by Tournament Division

Income	Ва	y	Offshore		
	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)	
< 10,000	0	0.0	2	1.3	
10-19,999	6	12.5	8	5.1	
20-29,999	12	25.0	18	11.5	
30-39,999	7	14.6	11	7.1	
40-49,999	8	16.7	14	9.0	
50-59,999	4	8.3	18	11.5	
60-69,999	1	2.1	7	4.5	
> 70,000	10	20.8	78	50.0	
No Response	6		10		
Totals	54	100.0	166	100.0	

Chi-square = 20.55

Significant at .05 level

General Fishing Participation

Participants in both divisions were active fishermen. In terms of their annual fishing participation, bay fishermen were more active than offshore competitors (Table 12). Bay division fishermen fished in saltwater an average of 99 days in 1982 and participants in the offshore division fished an average of 84 days. With regard to tournament participation, a majority in each division competed in fishing tournaments more than once a year.

Table 12. Frequency Distributions of Number of Bays Fishing in Previous Year

	Ba	ıy	Offshore		
Number of Days	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)	
0	0	0.0	1	.7	
1-13	0	0.0	9	5.9	
14-33	3	6.4	16	10.5	
34-63	10	21.3		35.5	
64-123	21	44.7	54 38	25.0	
124-330	13	27.7	34	22.4	
No Response	7		14		
Totals	54	100.1	166	100.0	

Chi-square = 11.30 Significant at .05 level

Both respondent groups fished primarily in saltwater and from a boat. A majority of the bay fishermen (56 percent) and the offshore

Yanglers (58 percent) did not fish in freshwater (Table 13).

Table 13. Respondents Who Participated in Each Fishing Type During Previous Year by Tournament Division

Fishing type	Bay %	Offshore %
Saitwater pier, shore,		
surf, or wade*	98.1	98.7
Saltwater boattotal	98.0	99.4
Saltwater boat in bays*	98.0	76.9
Saltwater boat in the Gulf*	44.2	96.3
Freshwater	44.2	41.6

^{*} Significant at .05 level

A majority of the bay (76 percent) and offshore (72 percent) anglers usually used artificial bait when fishing. Only a small percentage of the bay and offshore division respondents usually used only live and/or dead bait. The remainder used some combination of artificial, live and dead bait (Table 14).

A majority of fishermen in both divisions reported that most of their vacation trips included fishing. Participants in both divisions fished most often with family and/or friends.

Participants were asked to list their three favorite fish species in decreasing order. Because fishermen used common names to describe their species preferences, it is inappropriate to use scientific names in the following tables. When preferences for first, second and third choices are combined, sailfish, blue marlin, white marlin and speckled trout received less than a majority (48 percent) of all votes cast by offshore division fishermen (Table 15).

Table 14. Frequency Distribution of Type of Bait Usually Fished With

	Ba	ıy	Offshore		
Type of bait	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)	
Artificial	41	75.9	118	71.5	
Live	2	3.7	7	4.2	
Dead	1	1.9	4	2.4	
Artificial and Live	8	14.8	9	5.5	
Artificial and dead Artificial, live	2	3.7	16	9.7	
and dead	0	0.0	10	6.1	
Live and dead	0	0.0	1	0.6	
No Response	0		1		
	54	100.0	166	100.0	

Chi-square = 10.17

Not significant at .05 level

Redfish, speckled trout, flounder and snook were the favorites of the vast majority (95 percent) of bay division fishermen (Table 16). Since they are predominantly saltwater fishermen, tournament anglers listed only one freshwater species as a favorite—the largemouth bass.

About 70 percent of the tournament fishing respondents in both divisions devoted most of their fishing effort to catching one imparticular fish species (Table 17). In the bay division redfish (33 percent) and speckled trout (21 percent) were most frequently listed.

The greatest percentage of offshore anglers devoted most of their effort to catching blue marlin (20 percent) and the generic category billfish (18 percent).

Table 15. Fish Species Most Sought by Offshore Division Respondents

	Pre	eferenc	e	To	tal
Species sought	lst	2nd	3rd	N	*
Sailfish	6	28	33	67	14.7
Blue marlin	57	4	1	62	13.6
White marlin	1	36	8	45	9.9
Speckled trout	21	13	9 7	43	9.5
Redfish	13	19	7	39	8.6
Marlin	18	3	7	28	6.2
King mackerel	8	10	9 3 8 5 8	27	5.9
Billfish	15	3	3	21	4.6
Tuna	1	3 8 5 4	8	17	3.7
Ling	3 1	5	5	13	2.9
Dolphin	1	4	8	13	2.9
Wahoo	0	5 2 3 5 0	7	12	2.6
Flounder	3 2	2	6	11	2.4
Tarpon	2	2	6	10	2.2
Other	1	3	6	10	2.2
Yellowfin tuna	0	5	5 6	10	2.2
Offshore	2	0	6	8	1.8
Snook	0	4	3	7 3 2	1.5
Largemouth bass	1	· 0	2	3	0.7
Bonito	1	0	1		0.4
Blackfin tuna	0	1	1	2	0.1
Anything	0	0	2	2	0.1
Amberjack	1	0	0	1	0.2
Grouper	0	1	1	2	0.1
Total				455	99.9

A majority of tournament participants were boat owners. The most commonly owned boats reported by bay division participants were between 13 and 16 feet in length (33 percent), while offshore competitors most likely owned boats in either the 31 to 40 foot (19 percent) or greater than 40 feet in length categories (18 percent) (Table 18).

The average number of rod and reel combinations owned by respondents in both divisions was 12. The greatest number of combinations was 55, owned by one offshore division respondent.

Table 16. Fish Species Most Sought by Bay Division Respondents

	Preference			Total	
Species Sought	lst	2nd	3rd	N	*
Redfish	30	17	4	51	33.6
Speckled trout	17	27	6	50	32.9
Flounder	Ö	Ó	31	31	20.4
Snook	4	1	7	12	7.9
Bilifish	1	0	i	2	1.3
Other	1	0	1	2	1.3
Speckled trout & redfish	1	0	0	1	0.7
Largemouth bass	1	0	0	1	0.7
King mackerel	0	0	1	ĺ	0.7
Offshore species	0	0	1	1	0.7
Total				152	100.2

Offshore division participants spent about \$2,160 on rods, reels, bait and tackle during the previous year (Table 19). Bay division fishermen spent about \$660. Reels account for the greatest expenditure of participants in both divisions. The low expenditure among bay division fishermen for bait can be attributed to the fact that a majority of the group used artificial bait. Their bait expenditures would thus fall under tackle.

Table 17. Distributions of Species Participants Specialized in Catching by Tournament Division

	Ва	ıy	0ffs	hore
Species	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT
None	14	26.9	46	28.9
Redfish	17	32.7	10	6.3
Speckled trout	ii	21.2	10	6.3
Blue marlin	0	0.0	32	20.1
Billfish	1	1.9	29	18.2
Marlin	1	1.9	ī <u>ģ</u>	11.9
Red snapper	0	0.0	3	1.9
Offshore species	0	0.0	3	1.9
Trout and redfish	5	9.6	ó	0.0
King mackerel	0	ŏ.o	2	1.3
Sailfish	0	0.0	1	0.6
Boni to	0	0.0	i	0.6
Shark	0	0.0	i	0.6
Tarpon	0	0.0	i	0.6
Blackfin tuna	1	1.9	0	0.0
Snook	1	1.9	0	0.0
Largemouth bass	1	1.9	ī	0.6
No response	2	- 1	7	
Totals	54	99.9	166	99.8

Chi-square =78.08

Significant at .05 level

Table 18. Frequency Distributions of the Lengths of Respondent-Owned Boats by Tournament Division

Length	Ва	ıy	Offshore		
	Absolute frequency	Adjusted Freq.(PCT)	Absolute Frequency	Adjusted Freq.(PCT)	
Did not own boat	5	9.3	28	17.0	
1-12	. 5 8	14.8	0	0.0	
13-16	18	33.3	6	3.6	
17-20	13	24.1	24	14.6	
21-24	6	11.1	19	11.5	
25-30	4	7.4	26	15.7	
31-40	0	0.0	32	19.4	
40+	0	0.0	30	18.2	
No response	0		ī		
Totals	54	100.0	166	100.0	

Chi-square = 94.21 Significant at .05 level

Table 19. Mean Annual Expenditures for Fishing Equipment and Bait by Tournament Division

Category	B,a	У	0ffs	hore	t-value
	Expense	Percent	Expense	Percent	
Rods	174.72	26.4	597.83	27.6	4.89*
Reels	214.34	32.3	870.09	40.2	5.08*
Bait	78.45	11.8	173.90	8.0	2.01*
Tackle	195.38	29.5	520.72	24.1	3.97*
Total	662.89	100.0	2162.54	99.9	

*Significant at the .05 level

Tournament Fishermen Attitudes

Participants were asked a variety of questions about their attitudes towards fishing in general, tournament fishing, and the Texas International Fishing Tournament in particular. When asked what one thing they would most like to see done to improve fishing, bay participants mentioned increased enforcement of existing laws and the continuation of the Redfish Act of 1981 which prohibited the sale of Texas-caught redfish and speckled trout. Offshore anglers called for a ban on longlining and the restriction of commercial fishing.

Respondents were asked whether they felt prize money should be offered in tournaments. Although bay division respondents were more opposed to tournament prize money than offshore division fishermen, there was no significant difference between groups (Table 20). Tournament participants generally felt that lodging facilities and services were adequate. Only 6 percent and 4 percent of the offshore

Table 20. Frequency Distributions of Responses by Division as to Whether Prize Money Should be Offered in Tournaments by Tournament Division

•	Ва	ıy	Offs	hore
Response	Absolute Frequency	Adjusted Freq.(PCT)	Absolute Fr eque ncy	Adjusted Freq.(PCT)
Yes	16	30.2	69	42.6
No	24	45.3	-	27.8
Some tournaments	13	24.5	45 48	29.6
No response	1		4	
Totals	54	100.0	166	100.0

Chi-square = 5.73

Not significant at .05 level

and bay division respondents, respectively, were dissatisfied.

Inadequate marina facilities and high boat slip rents were the most frequent complaints.

Participants were also asked about the tournament itself, what they liked most about it and what they disliked. Responses to the questions were varied and nearly half could not be placed in a specific category. In both divisions, however, about 20 percent of the respondents most liked the well-organized nature of the tournament. The most frequent response to what participants disliked about the tournament was inadequate weigh-in facilities, accounting for 11 percent and 15 percent of the bay and offshore fishermen, respectively. In addition, 15 percent of the offshore competitors wanted the tournament to be shortened from three to two days.

Tournament Fishing Motives

Tournament participants were presented a series of 17 items and asked to rate each in importance as reasons for tournament fishing. The response categories ranged from not at all important (1) to extremely important (5). Most fishermen in both divisions considered the challenge or sport as the most important reason for tournament fishing (Tables 21, 22). Bay and offshore participants also ranked tournament fishing as very important to escape from the regular routine, to be outdoors, and to relax. Overall, bay and offshore division participants differed significantly on three of the 17 fishing motives. Bay

Table 21: Importance of Tournament Fishing Motives to Offshore Division Respondents

Tournament Fishing Motives	Mean	Not at all Important	Slightly Important 2 Value	ly Moderately Ver ant Important Import 4 4 9 3 4 4 Values given are percentages.	Very Important 4 centages.	Extremely Important 5
	;	a -	2.5	15.6	32.5	47.5
For the challenge or sport	17.6	K • 7		7.71	36.2	36.2
To get away from the regular routine	3.89	٠.	7	7 70	29.3	35.7
For the experience of the catch	3.83	4.	, ,	7 01	25.6	38.7
For relaxation	3.76	6.07	9 0	23.1	41.1	22.1
To be outdoors *	3.64	6.7	0.0		. 00	28.9
10 01 01 00 01 00 00 00 00 00 00 00 00 0	3.60	6.9	11.9	23.9	C:07	
TO DE CIORE TO THE SEA	3.56	5.6	8.1	32.5	31.9	617
To be with my intends	200	19.5	14.4	14.0	23.1	35.0
To get away from the demands of people	7.	12.0	1.01	21.4	24.5	30.7
To obtain a "trophy" fish	7	0.0	15.6	25.6	28.7	21.9
To develop my skills	3.41	1.0		31.2	30.6	16.6
To experience natural surroundings *	3.33	٠. ا	7.57	900	30.2	13.8
To experience new and different things	3.21	. 6		2,42	31.9	7.6
For family recreation	3.03	15.0	11.3		7 6	14.6
The Later of the Control of the Cont	2.78	20.4	23.6	78.0	† · · · ·	
Io atu a tropuò	77.6	29.6	14.8	24.7	11.1	0.61
For the prize money		23.5	25.9	30.2	13.6	
To obtain fish for eating "	,	, 6	20.5	25.6	10.9	9.6
To test my equipment	64.7					

* Significant difference between divisions at the .05 level

Tournament Fishing Motives	Not at all Important I	Slightly Important 2 Values	tly Moderately Ve tant Important Impor 3 4 Values given are percentages.	Very Important 4 ntages.	Extremely Important 5
For the challenge or sport To get away from the regular routine 4.21 To be outdoors 4 To get away from the demands of people 4.04 To experience natural surroundings 4 4.00 For relaxation To obtain a "trophy" fish To develop my skills To be wity my friends To obtain fish for eating 8 3.71 To experience new and different things 3.35 For family recreation 3.33	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 3.8 3.8 5.8 7.8 7.8 7.8 7.8 6.1 17.3	11.5 9.6 11.3 15.4 12.0 12.0 12.0 13.3 13.3 13.3	22 22 22 23 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	53.8 50.0 43.4 53.8 35.3 30.0 30.0 21.2 19.2
	23.1 23.5 30.8	17.3 21.6 15.4	15.4 21.6 28.8	19.4 23.5 3.8	25.0 9.8 21.2

* Significant difference between divisions at .05 level

natural surroundings and obtaining fish for eating than do offshore fishermen (Tables 21, 22).

Consumptive Aspects

A series of nine statements were included in the survey to determine the attitudes of tournament fishermen on the consumptive aspects of fishing. Participants could respond to the statements on a scale format ranging from strongly disagree (1) to strongly agree (5). The statements covered several aspects of catching fish and the importance of size and number of fish caught (Tables 23, 24). Most fishermen in both divisions agreed or strongly agreed with the statements "I would rather catch one or two big fish than 10 smaller ones," "The bigger the fish I catch, the better the fishing trip" and "I usually eat the fish I catch." Most respondents disagreed that "It doesn't matter to me what type of fish I catch," and "When I go fishing, I'm just as happy if I don't catch a fish." In contrast, a majority of respondents in both divisions agreed that "A fishing trip can be successful even if no fish are caught."

Based on the mean score for each statement, there were few significant differences between groups of tournament participants.

Significant differences occurred in response to the statements "! usually eat the fish 1 catch" and "I'm just as happy if I don't keep the fish 1 catch." Offshore division fishermen were less oriented than bay division fishermen to keeping and eating their catch.

Frequency Distribution of Responses to Consumptive Aspects of Fishing by Offshore Division Respondents Table 23:

Item	Mean	Strongly	Disagree	Weutral	Agree	Strongly
		1	7	m	4	78 ee
			Values g	Values given are percentages.	itages.	
I would rather catch one or two big fish 4.24 than ten smaller ones	4.24	1.2	4.3	15.3	27.6	51.5
The bigger the fish I catch, the better	3.92	0.0	6.6	21,1	36.0	32.9
I usually eat the fish I catch *	3.87	5.5	6.9	13,5	49.1	27.0
A fishing trip can be successful even if	3,80	4.2	7.9	13.3	52.7	21.8
no fish are caught						
The more fish I catch, the happier I am	3.58	4.2	10.9	26.1	40.0	18.8
I'm just as happy if I don't keep the	3.38	9.1	13.9	24.2	35.2	17.6
A successful fishing trip is one in	3.34	3.1	21.7	29.3	30.4	15.5
When I go fishing, I'm just as happy if I Ann't catch a fish	2.64	13.3	33.9	32.7	15.2	4.8
It doesn't matter to me what type of fish I catch	2.55	21.3	31.7	22.0	20.7	4.3

* Significant difference between divisions at the .05 level

Table 24: Frequency Distribution of Responses to Consumptive Aspects of Fishing by Bay Division Respondents

Item	Mean	Strongly Disagree	Disagree 2 Values	ree Neutral Agree 4 4 4 Values given are percentages.	Agree 4 centages.	Strongly Agree 5
I usually eat the fish I catch *	4.40	0.0	3.8	5.7	37.7	52.8
I would father catch one or two ore I would father catch one list fath	3.98	3.8	7.5	11.3	41.5	35.8
The more fish I catch, the happier I am	3.77	5.7	9.4	22.6	26.4 48.1	35.8 15.4
A fishing trip can be successive the no fish are caught	3.42	5.7	20.8	26.4	20.8	26.4
A succession tented of the fish are caught many fish are caught	2.79	17.0	26.4	26.4	20.8	4.6
I'm just as lappy at I catch * I catch * When I go fishing, I'm just as happy if I It doesn't matter to me what type of	2.36	20.8 24.5	47.2	13.2	13.2	5.7
fish I catch						

* Significant difference between divisions at .05 level

Tournament Expenditures

Survey participants were asked to estimate their daily individual expenses during the tournament for items such as gas and oil, launch fees, fishing tackle, bait, ice, snack foods and beverages. They were also asked to estimate the total amount of money spent in Port Isabel-South Padre Island restaurants and lodging facilities during their stay, including expenses for family members and friends not fishing in the tournament. Tournament fishermen were also asked to indicate whether each item was purchased at home or in the tournament area. This information was important in determining the economic impact on the area due to the tournament.

Bay Division Daily Fishing Expenses

Most of the fishermen purchased or contributed to the purchase of seven of the 10 expense items listed (Table 25). Less than a majority of the fishermen incurred expenses for boat launch or slip fees, bait, and "other." The greatest average amount spent by bay fishermen who purchased the item was for "other." This category included expenses for repairs, receptions, entertainment and charter fees. The low percentage of fishermen who purchased bait (26 percent) reflects the finding reported earlier that a vast majority of tournament anglers used artificial lures only. Although the average amount spent by bay fishermen for lodging was substantial (\$65), just less than half of the respondents did not incur expenses for this item. This is because 59 percent of the bay division fishermen resided in Cameron County and were able to return home after each day's fishing. In addition, many of the

anglers owned or rented a house, trailer, or a condominium on South

Padre Island and did not count part of the monthly payment as a

tournament expense. All or nearly all of the anglers purchased ice,

snacks and beverages, restaurant meals and fuel for the boat and car.

Table 25. Average Daily Expenditures of Bay Division Fishermen by Type of Purchase

Type of Purchase	Percent of Fishermen Who Purchased Each tem	Average Amount Spent by Fishermen Who Purchased Item
One for out o	87.0	\$ 11.64
Gas for auto	94.4	22.82
Gas and oil for boat	20.4	14.64
Launch fees or boat slip	72.2	46.97
Fishing tackle and equipment		22.29
Bait	25.9	6.79
Ice	88.9	31.13
Snacks, beer, beverages	100.0	
Other ²	9.3	101.00
Restaurant meals ³	79.6	28.68
Lodging ³	51.8	65.30

Includes respondents only.

The total expenditures resulting from purchases by the bay division tournament fishermen totaled about \$40,527 (Table 26). This does not include the \$65 registration fee paid by each fishermen. These fees

Other includes expenditures for repairs, receptions, gifts, entertainment and charter fees.

Dining and lodging include total expenses on a daily basis incurred by participants and others who accompanied them during the tournament. Total expenses were divided by average number of nights (4.5) in the South Padre Island area to yield average daily amount.

would raise the total expenses by \$5,720, but were not considered in the economic analysis because it was uncertain how or where they were spent. However, it can be assumed that this money could provide additional economic impact on the county and state economies.

Table 26. Total Direct Purchases of Bay Division Fishermen

Type of Purchase	Total Amount Spent:	Percent of Total
Lodging	\$ 10,049	24.8
Restaurant meals	6,628	16.4
Snacks, beer, beverages	6,313	15.6
Fishing tackle and equipment	6,042	14.9
Gas and oil for boat	5,072	12.5
Gas for auto	2,231	5.5
)ther	1,454	3.6
ce	1,361	3.4
Bait	899	2.2
aunch fees or boat slip	478	1.2
[ota]	\$40,527	100.1
Registration fees	\$ 5,270	
Grand Total	\$ 45.797	
¹ Includes Respondents and non	respondents.	

Purchases of items directly associated with fishing, such as boat fuel, launch or slip fees, fishing tackle and bait, amounted to 31 percent of the total. Items associated with fishing but not required for it totaled 28 percent and included gas for the auto, ice, snacks and beverages and "other." Combined, restaurant meals and lodging accounted for \$16,677 in expenses or about 41 percent of the total.

Offshore Division Daily Fishing Expenses

The average daily expenditures of the offshore participants are presented in Table 27. A majority of the fishermen incurred expenses in six of the 10 categories. The low percentage of fishermen who purchased bait for the tournament again reflects the finding that more than 70 percent of the respondents used artificial bait only.

Table 27. Average Daily Expenditures of Offshore Division Fishermen by Type of Purchase

Type of Purchase	Percent of Fishermen Who Purchased Each Item	Average Amount Spent by Fishermen Who Purchased Item
Gas for auto Gas and oil for boat Launch fees or boat slip Fishing tackle and equipment Bait Ice Snacks, beer, beverages Other ² Restaurant meals ³ Lodging ²	73.5 73.5 32.5 53.0 24.1 86.7 92.2 12.7 85.5 48.2	\$ 19.72 225.31 36.39 124.25 30.90 13.84 58.54 185.62 37.81 75.67

Includes respondents only.

Direct expenditures by the offshore division participants totaled about \$409,000 (Table 28). This does not include the \$65 registration fee which would raise the total by \$23,270.

Other includes expenditures for repairs, receptions, gifts, entertainment and charter fees.

Dining and lodging include total expenses on a daily basis incurred by participants and others who accompanied them during the tournament. Total expenses were divided by the average number of nights (5.7) in the South Padre Island area to yield average daily amount.

Purchases for items specifically needed for fishing such as gas and oil for the boat, launch or boat slip fees, bait, and tackle, accounted for over 50 percent of the total expenses. Expenditures for items associated with but not specifically required for fishing amounted to \$72,147, or 17.6 percent of the total and included auto fuel, ice, snacks and "other." About 31.8 percent of the total expenses incurred by the offshore fishermen was for lodging and restaurant meals.

Table 28. Total Direct Purchases of Offshore Division Fishermen

Type of Purchase	Total Amount Spent ¹	Percent of Total
Gas and oil for boat	\$ 147.014	36.0
Restaurant meals	66,699	16.3
Lodg i ng	63,441	15.5
Fishing tackle and equipment	47,095	11.5
Snacks, beer, beverages	41.745	10.2
Other	11,226	2.7
Ice	10,268	2.5
Gas for auto	8,908	2.2
Launch fees or boat slip	7.946	1.9
Bait	4.343	1.1
Total	\$ 408,685	99.9
Registration fees	\$ 23,270	
Grand Total	\$ 431,955	

Location of Purchases

To determine the economic significance of the direct expenditures, the locations of the purchases must be known. Fishermen were asked to indicate for each item whether it was purchased in the South Padre Island area, in their home community or both places.

Bay Division Purchases

About \$32,000 of the \$40,500 in purchases made by the bay fishermen were made in the South Padre Island area (Table 29). The largest expenditures were for items not directly associated with fishing, including lodging and restaurant meals. A majority of the fishermen spent money in South Padre Island for all items except fishing tackle and gas for the auto. This is understandable since tackle could be purchased by anglers for the tournament in advance, and gas could be purchased at home for the entire trip.

Offshore Division Purchases

More than 95 percent, or \$394,000, of the \$409,000 spent by the offshore division tournament participants was spent in the South Padre Island area (Table 30). A majority of offshore fishermen spent money in the South Padre Island area for all types of expenditure except fishing tackle. Expenses for lodging and restaurant meals incurred in South Padre totaled \$130,140, or about 33 percent of the total expenditures.

Table 29. Location of Purchases by Bay Division Fishermen

	Percent \	Percent Who Purchased Items:			
Type of Purchase	In SPI	At Home	Both	\$ Spent in SPI	
Lodging	100.0			10,049	
Restaurant meals	100.0			6,628	
Gas and oil for boat	87.4	9.0	3.5	4,571	
Snacks, beer, beverages	53.1	18.1	28.8	4,004	
Fishing tackle	37.1	49.2	13.7	2,407	
Gas for auto	39.6	20.2	40.2	1,278	
ice	66.0	33.6	0.4	969	
Bait	93.5	3.2	3.4	835	
Other	100.0	0.0	0.0	677	
Launch fees or boat slip	78.3	21.8	0.0	377	

¹ includes respondents only

Economic Impacts on the State of Texas

To determine the economic impact of tournament related-expenditures on Cameron County and the state of Texas, it was necessary to determine whether purchases were made by residents or non-residents. It was assumed that money spent by local residents to participate in the tournament did not have an economic impact on the area since it most likely would have been spent there even if the tournament had not been held. Expenditures incurred by non-residents of the area, however, were considered new monies, which increased the area's economic base and therefore produced economic impacts.

includes respondents and non-respondents. This is a conservative estimate since expenditures of respondents making purchases at both locations were omitted.

Table 30. Location of Purchases by Offshore Division Fishermen

	Percent	Who Purchased	item¹	Total \$ Spent
Type of Purchase	in SPI	At Home	Both	In SPE
as and oil for boat	95.7	2.3	1.9	144,517
Restaurant meals	100.0			66,699
Lodg i ng	100.0			63,441
Fishing tackle and equipment	36.8	53.4	9.8	45,296
Snacks, beer, beverages	84.3	7.0	8.7	39,328
Ice	90.7	3.5	5.8	9,778
Gas for auto	63.1	18.7	18.2	7,943
Launch fees or boat slip	95.4	1.8	2.8	7,024
Other	51.5	6.4	42.0	6,840
-	90.3	6.8	2.9	3,752

includes respondents only

Purchases of goods and services by non-local tournament fishermen provided money to merchants which they re-spent for goods and services needed to maintain their businesses. This re-spending represents an indirect benefit which is included as part of the economic impact resulting from the tournament. Some of this money is spent outside the local area while the rest is spent locally. This spending and re-spending continues until the original money is no longer within the local economy. The extent to which money is re-spent in a particular section of a regional economy is reflected in the magnitude of the economic multiplier used to understand total economic impact.

Includes respondents and non-respondents. This is a conservative estimate since expenditures of respondents making purchases at both locations were omitted.

The 1983 Texas International Fishing Tournament also impacted the state of Texas by inducing out-of-state fishermen to spend money in Texas. The re-spending of this new money within the state produced an indirect impact included in the economic impact on Texas.

Impacts can also be calculated at the county level from expenses of non-county residents and the re-spending of the initial dollars within the county. The economic impact of the TIFT on Cameron County included expenditures by out-of-state and out-of-county fishermen.

Bay Division Statewide Economic Impact

Out-of-state fishermen competing in the bay division of the TIFT spent about \$500 to participate (Table 31). All of their expenditure was made in the South Padre Island area. The expenditures were low because only two fishermen came from out of state to participate in the bay division. In addition, this figure does not include registration fees. The lack of an automobile fuel expense may be attributed to fishermen sharing expenses with others not participating in the tournament or competing in another division.

The statewide economic impact due to re-spending effects of bay division non-resident expenditures in South Padre Island is shown in Table 32. The economic multipliers used to indicate the indirect impacts vary for different economic sectors and were derived from a study by the Texas Department of Water Resources (1983). Multiplying total non-resident tournament expenses in Texas by the respective economic multipliers provides an estimate of indirect expenditure. The \$506 initial expenditures, therefore, resulted in an economic impact of \$1,491 on the state of Texas.

Table 31. Location of Purchases by Out-of-state Bay Division Fishermen

,	Amount Spent	Amount Spent	Total	% Spent
Type of Purchase	in Home State	in SPI	Amount Spent ¹	in SPI
Restaurant meals	o	350	350	100.0
Gas and oil for boat	0	98	98	100.0
Snacks, beer, beverages	0	40	40	100.0
Ice	0	12	12	100.0
Launch fees or boat slip	0	6	6	100.0
Fishing tackle and equipme	ent 0	0	0	0.0
Gas for auto	0	0	0	0.0
Lodging	0	0	0	0.0
Bait	0	0	0	0.0
Other	0	0	0	0.0
Totals	\$ 0	\$ 506	\$ 506	

Includes respondents and non-respondents

Offshore Division Statewide Economic Impact

Table 33 shows that nine out-of-state offshore division fishermen spent a total of more than \$15,000 and that 100 percent of these expenses were incurred in the South Padre Island area. This figure represents less than 4 percent of the total expenditures by offshore fishermen in South Padre Island. Less than 3 percent of the offshore division participants were from out of state. The total statewide economic impact resulting from expenditures by these fishermen was about \$41,400 (Table 34).

Table 32. Economic impact of Purchases by Out-of-state Bay Division Fishermen on the state of Texas

Type of Purchase	Amount Spent in SPI by Out-of-State fishermen	Multiplier	Total Statewide Impact of Out-of-State Fishermen Purchases ¹
Restaurant meals	\$ 350	3.11	\$ 1,089
Gas and oil for boat	98	2.39	234
Snacks, beer, beverages	40	2.88	115
Ice	12	2.88	35
Launch fees or boat slip	6	3.08	18
fishing tackle and equipment	t 0	2.80	0
Gas for auto	0	2.39	0
Bait	0	2.80	0
Other	0	2.81	0
Lodg i ng	0	2.88	0
Totals	\$ 506		\$ 1,491

includes respondents and non-respondents

Economic Impact on Cameron County

Economic impacts on Cameron County result from the re-spending of money brought into the area by both out-of-state tournament fishermen and fishermen from other Texas counties. While statewide multipliers were available for 1979, they were not available for the regional level. Therefore, the following formula was used (Hawkins, Jones, personal communication) to calculate 1979 regional multipliers that were applied in the Cameron County area.

Table 33. Location of Purchases by Out-of-state Offshore Division Fishermen

Type of Purchase	Amount Spent in Home State	Amount Spent in SPI ²	Total Amount Spent	% Spent in SPI
Gas and oil for boat	0	\$ 6,912	\$ 6,912	100.0
Restaurant meals	0	2,858	2,858	100.0
Snacks, beer, beverages	0	2,527	2,527	100.0
Ice	0	1,037	1,037	100.0
Lodging	0	956	956	100.0
Launch fees or boat slip	0	389	389	100.0
Other	0	389	389	100.0
Gas for auto	0	285	285	100.0
Fishing tackle and equipment	ment 0	Ō	0.	0.0
Bait	0	0	0	0.0
Totals	0	\$ 15,353	\$ 15,353	

Includes respondents and non-respondents

Regional multipliers are smaller than those used to determine statewide impact because money circulates for a shorter time within the region.

Bay Division Economic impact on Cameron County

Cameron County received its greatest impact from expenditures by non-local bay division fishermen for lodging and restaurant meals in the South Padre Island area (Table 35). Combined, expenses in these two categories accounted for more than 60 percent of the almost \$30,000 total economic impact on the area.

Table 34. Economic Impact of Purchases by Out-of-state Offshore Division Fishermen on the state of Texas

Type of Purchase		Amount Spent in SPI by Out-of-State Fishermen	Multiplier	Total Statewide Impact of Out-of-State Fishermen Purchases ¹
Gas for boat	,	\$ 6,912	2.39	\$ 16,520
Restaurant meals		2,858	3.11	8.888
Snacks, beer, bev	erages	2,527	2.88	7,278
Ice	_	1,037	2.88	2,987
Lodg i ng		956	2.88	2,753
Launch fees or bo	at slip	389	3.08	1,198
Other .		389	2.81	1,093
Gas for auto		285	2.39	681
Fishing tackle an	d equipment	0	2.80	0
Bait		0	2.80	0
Totals		\$ 15,353		\$ 41,398

Offshore Division Economic Impact on Cameron County

As a result of purchases made by non-local offshore division fishermen, Cameron County realized an economic impact of about \$531,000 (Table 36). Lodging and restaurant meal expenditures accounted for about 51 percent of the total, and boat fuel purchases for almost 27 percent.

Table 35. Economic Impact of Purchases by Bay Division Fishermen on Cameron County

Type of Purchase	Amount Spent by non-Cameron Co Residents in SPI		Total Impact of Purchases on Cameron Co. ²
Lodging	\$ 3,878	2.72	\$ 10,548
Restaurant meals	3, 195	2.63	8,403
Snacks, beer, beverages	1,740	1.77	3,080
Gas and oil for boat	1,994	1.50	2,991
Fishing tackle and equipm	ment 911	1.86	1,694
Bait	487	2.17	1,057
Gas for auto	681	1.50	1,022
Ice	337	1.77	596
Launch fees or boat slip	161	1.87	301
Other	101	2.07	209
Totals	\$ 13,485		\$ 29,901

Table 36. Economic Impact of Purchases by Offshore Division Fishermen on Cameron County

Type of Purchase	Amount Spent by non-Cameron Co. Residents in SPI	Multiplier	Total impact of Purchases on Cameron Co.
Lodging	\$ 53,492	2.72	\$ 145,498
Gas and oil for boat	94,969	1.50	142,454
Restaurant meals	48,106	2.63	126,519
Snacks, beer, beverages	26,957	1.77	47,714
Fishing tackle and equipmen	t 15,681	1.86	29,167
Ice	7,453	1.77	13,192
Launch fees or boat slip	4,785	1.87	8,948
Gas for auto	4,697	1.50	7,046
Other	2,964	2.07	6,135
Bait	2,103	2.17	4,564
Totals	\$ 261,207		\$ 531,237

CONCLUSIONS AND IMPLICATIONS

In analyzing the data for this report, a comparison of bay division participants and offshore division participants was made. Though some significant differences were found between the groups, results indicate they are more similar than different.

One major difference between fishermen in the divisions was the offshore division competitors' tendency to have greater annual household incomes. Bay division fishermen were much more likely to be locals and tended to fish more frequently during the year. It is likely bay division fishermen were able to go fishing more often because a large majority of them lived within one-hour's driving time of a bay. Besides fishermen in the two groups favoring different species of fish, offshore division fishermen owned larger boats and spent three times as much money annually for fishing. These differences were likely due to inherent differences in the two types of fishing. Larger boats are required and greater expenditures are incurred for offshore fishing.

The TIFT was successful in an economic sense. Results indicate tournament-generated expenditures produced significant impacts to the local South Padre Island area and Cameron County. The state of Texas realized an insignificant economic impact because the tournament drew a small number of out-of-state fishermen (3 percent) and it is this group's expenditures which produce statewide impacts. Expenditures by offshore division participants resulted in greater impacts on the county and state than those of bay division participants for three reasons: 1) four times as many participants competed in the offshore division; 2) on

the average, offshore division fishermen spent more to participate in the tournament; and 3) the offshore division drew a greater percentage of out-of-state and non-county residents. The latter reason is the most important in determining economic impacts since it is new monies brought into the area by non-residents which produce impacts.

Tournament fees paid by fishermen and non-fishing participants in the TIFT were excluded from the impact analyses because of the uncertainty of how and where they were re-spent. Tournament officials were unable to provide a complete itemization of expenses but assured us that the vast majority of expenses - entertainment, printing, advertising and data analysis - was made in Cameron County. This means that there were additional impacts on the Cameron County economy above and beyond these reported here.

If the success of a fishing tournament is measured by the expenditures and economic impacts it produces, it is important to examine the factors which contribute to this success. There are at least four: 1) the number of fishermen who participate; 2) the origin of the participants; 3) how many non-participants they bring; and 4) length of stay. The increasing number of anglers competing in the TIFT peaked in 1982, then decreased in 1983.

It is possible that some fishermen who participated in 1982 dropped out of the tournament the next year because they felt the event was becoming too expensive or too large given the available facilities.

This latter point is supported by the fact that the most frequent complaint of both bay and offshore division respondents was the tournament lacked adequate weigh-in and fueling facilities. TIFT

officials remedied this for 1984 by moving the tournament to a larger marina with greater capacity. In addition, more than half of the respondents first learned about the tournament through friends. The improvement in facilities could help to attract more first-time participants.

The second factor in an economically successful tournament is participants' origin. The money brought into the area by non-residents determined the economic impact resulting from the tournament. Thus, the greater the number and expenditures of out-of-state and non-county residents, the greater the statewide and county economic impacts, respectively. Increased advertising in other states could draw more fishermen but the travel distance to the South Padre Island area is probably a deterrent to increased participation. As a result, the most important contributions to the local economy of Cameron County were made by fishermen from other Texas counties. If TIFT officials are concerned with enhancing the economic impact of the tournament, they should concentrate on serving offshore fishermen since they are more likely to originate from out of county, tend to spend more and participate in greater numbers. However, a trade-off exists because as the number of "outsiders" increases, local support and bay division participation may decline. In this regard, a number of bay division competitors reported what they disliked most about the tournament was insufficient attention and importance placed on their division.

The third factor affecting tournament success is the number of additional people accompanying participants to the tournament. Money spent locally by non-participants is just as beneficial as expenditures

by competitors. If non-participants accompanied a competitor to the South Padre Island area and incurred expenses as a result, the impact could be attributed to the tournament. Effort is made in this study to estimate the added expenditures of non-participants for items such as restaurant meals and lodging, but other expenditures by non-participants are not estimated. Non-participants' expenditures during the 1983 TIFT were probably substantial because approximately 70 percent of the participants brought at least one additional person with them. TIFT officials should consider planning or promoting additional activities family members and friends could enjoy while the tournament is in progress. Additional activities or events could attract more non-participants who could become repeat visitors.

The length of time fishermen stay in the area is the final factor. The longer people stay, the more money they will spend. Survey results indicate most fishermen spent between three and five nights in the South Padre Island area. As a result, economic benefits from lodging expenditures were substantial. However, an attempt to induce fishermen to stay longer in the area by increasing the duration of the tournament would probably not be successful. Results show more than 10 percent of the offshore division anglers already wanted the tournament shortened to two days. Increased revenue from fishermen staying additional nights to compete in a longer tournament would likely be offset by decreased expenditures by offshore fishermen who might drop out of the tournament.

The economic impact of saltwater sportfishing tournaments can be significant to state and local economies. However, compiling the expenditures and determining the economic impact does not tell the whole

story. To completely assess the benefits of the TIFT, the public costs of holding such an event must be considered. For example, added wear and tear on road systems, additional state and municipal services, increased traffic congestion, and additional law enforcement must be considered in conjunction with the estimates of economic impact provided in this report. These tournament costs remain to be investigated.

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Appendix A

MAIL SURVEY INSTRUMENT

TEXAS AM UNIVERSITY

DEPARTMENT OF RECREATION AND PARKS

1983 TOURNAMENT FISHING STUDY

QUESTIONNAIRE

	IN THE FOLLOWING QUESTIONS, PLEASE EXPENDITURES, AND OPINIONS OF THE	1983 T.I	.F.T. TOURN	AMENT.	•	
١.	How many times have you fished the	T,I.F.T	. before?		-	
2.	How many days did you fish in this	tournam	ent? 📑 1	[] 2	□ 3	
	How many family members or non-tou				with you?	
4.	How many nights did you spend in t	he Port	Isabel-So.P	adre Isla	nd area? _	
5.		riends	.? Magaz ine Newspape	Mail		
€.	. What type of lodging did you use t	while in	the Port Is	abel area	?	
7.	. Were lodging and other facilities	and serv	rices adequa	107	□ Yes	□ No
	If no, please explain:				<u> ,</u> "	· · · ·
A	. Do you feel prize money should be	offered:	Yes	□ No □	Some Tourn	aments
	. What one thing did you most like a					
•						
10	What one thing would you most like FOR EACH ITEM LISTED BELOW, PLEAS YOU SPENT EACH DAY OF TOURNAMENT	e FRTIMA	TE THE AVER	AGE AMOUNT	OF MONEY	
	TOU SPENT EACH DAT OF TOURISM		Spent		Item Was 6	ought
		Each	•	Home	Port Isab	oe i
	Gas or Diesel for Auto	·				
	Gas and Dil for Boat	·				
	Launch Fees or Boat Slip			Ð		
	Fishing Tackle and Equipment	·		₽	0	
	Bait				0	
	Ice					
	Snack Foods, Been, Other Beverage				0	
		· · · · ·		п	п	

11.	Estimate the total amount which was spent in	rest	aurants in	the Port	I sabe ! -
	So. Padre Island area (include expenses for	famil	y members.	etc.)	
12.	Estimate the total amount which was spent for	r tod	ging in th	Port Ise	be1-So.
	Padre Island area (Include expenses for fami	ly me	mbers, etc	.)	
	PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT THE THIRD TO TOURNAMEN				GENERAL.
13.	Please list in order, the fish species you fish for most often during the year:	Favo	rite Fish ,		
		2nd	Favorite		
			Favorite		
14.	Please explain why you listed the first fish				
15.	Do you subscribe to any fishing or sporting :	magaz	ines?	□ Y•	s No
16.	How often do you read fishing reports in the	news	paper?		ely astonally ularly
17.	About how many of your close friends fish?		☐ None	□ Some	☐ Most
18.	How many of your vacation trips include fish	ing?	☐ None	□ Some	☐ Most
19.	About how many of your co-workers fish?		□ None	☐ Some	□ Most
20,	What types of groups do you fish with? (CHECK AS MANY AS APPLY)		☐ By yours ☐ Friends ☐ Family ☐ Family ☐ Club		together
21.	Which type of group do you fish with most of	ten?			
	Do you usually fish with the same group of po			Ye	
23.	Which member of the fishing group usually Tourself Another member	of t	he group		_
24.	Do you put most of your effort into fishing				
	Yes No If yes, what species:				
∡ o.	Do you make any of your own fishing gear?	TOR	IINO What	k ind?	

26 .	How many rod and reel combinations do you of	un?	
27.	Do you usually fish with: Artificial Bait [Live Bait	□ Dead Bait!
28.	How many fish do you usually catch compared to the	everage flah	erman?
	☐ Fewer fish ☐ About the s	ame number	☐ More fist
29.	Below is a list of reasons why people fish in TOURNA number that indicates how important each item is to TOURNAMENT fishing.		
	REASONS:		
	To be outdoors,	.1 2	3 4
	For family recreation , , , , , ,	.1 2	3 4
	To experience new and different things	.1 2	3 4
	For relaxation	.1 2	3 4 5
	To be close to the sea.	. 1 2	3 4 5
	To obtain fish for eating	. 1 2	3 4 5
	To get away from the demands of other people. For the experience of the catch	.1 2	3 4 5
	To test my equipment.	.1 2	3 4 9
	To be with friends	. 1 2	3 4 5
	To experience natural surroundings,	.1 2	3 4 5
	To win a trophy , , , , , , ,	1 2	3 4 5
	To develop my skills	.1 2	3 4 5
	To get away from the regular routine.	. 1 2	3 4 5
	To obtain a "trophy" fish	. 1 2	9 4 5
	for the prize money.	. † 2	3 4 5
		•	3 4 5
30 .	How do you compare your fishing ability to that of o	•	
	☐ Less skilled ☐ Equally skil	led [∃ More skilled
31.	How much did you spend on the following types of fis	hing equipme	nt during 1982
	A.reels C.bait		
	B.rods D.tackle (lures, hooks,	lines, etc.)	
32 .	Considering all the fishing you did during 1982, abo days did you spend doing each of the following types	ut how many of fishing?	
A	Number of days saltwater pier, shore, sur	f, or wade f	ishing,
•	Number of days saltwater boat fishing.		
	1. Number of days boat fishing in bays		
	if. Number of days boat fishing in the Gulf $_$		
¢	Number of days freshwater fishing.		

33. How much time	do you usually (spend fishing co	Ampared to t	he aver	ge fis	iherman?
	□ Less time	☐ About	the same		-	re time
	The foresting 3th	WHICH YOU AGREE TEMENTS ABOUT FI	OR DISAGREE SHING.		The same of the sa	
The more fish I c A fishing trip ca When I go fishing I usually eat the A successful fish I would rather ca It doesn't matter The bigger the fis I'm just as happy	, I'm just as hap fish I catch ing trip is one i tch one or two bi to me what type sh I catch, the b if I don't keep	py if I don't can be which many fis g fish than tan of fish I catch. atter the fishin the fish I catch.	re caught tch a fish h are caught smaller fish g trip		6 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	4 5 4 5 4 5 4 5
35. How often do y	/ou participate 1	n fishing tourne		his is o	ery 2-: Ber	years
36. Are you a memb	er of a fishing a	:Tub2	-	lore thai	1 ance	a year
					Yes	□ No
37. Have you ever:		milator on a fish itslator on a fis ing on a fisherie		er?	Yes Yes Yes	% % %
38, Do you own a b	oat?			_		
If yes, wh	at length is it?	•		Ц	Yes	□ No
	NUESTIONS WILL HE IDENTIFIED WITH	LP US TO KNOW MOI 1 YOUR ANSWERS, S			ter fi	shing?
10. What is your oc						
lf. What is your ag	e?					
12. Are you:	☐ male	☐ female?				
3. What is your ap	proximate annual	household income	before text	957		
☐ Und ☐ \$10 ☐ \$20	er \$10,000 ,000 to \$19,999 ,000 to \$29,999	\$30,000 to \$ \$40,000 to \$ \$50,000 to \$	39.999 [49.999 [] 59,999	\$60,000 \$70,000	and	above
THANK YOU! PLE	ASE RETURN IN THE	STAMPED RETURN	ENVELOPE AS	SOON AS	POSSI	BLE.

Appendix B

COVER LETTER



Texas Agricultural Extension Service The Texas A&M University System

County Building San Benito, TX 78586

August 8, 1983

Dear T.I.F.T. Fisherman:

The Department of Recreation and Parks of Texas A&M University is conducting a study to provide information about tournament fishermen and the economic impact associated with fishermen who participate in fishing tournaments. This information will be useful to local communities and their businesses, and will help to guide future planning and operation of tournaments.

When planning for the future, local businesses and tournament officials need to consider you, the tournament fisherman. Your responses to our questionnaire are as important to you as they are to us because you participate in and enjoy this specialized fishing activity.

As you probably know, the accuracy of our study depends a great deal on the number of returned questionnaires we receive; so we would greatly appreciate it if you would complete the questionnaire and return it to us in the enclosed postage-paid envelope as promptly as possible. All responses will be handled in strict confidentiality.

Thank you for your time and effort.

Sincerely.

Robert B. Ditton Professor

Robert B. Witten

RBD: mm

Enclosure

Darrell L. Freeman Research Assistant

Danell E. Frem

The Turks ABM University System. U.S. Department of Agriculture, and the Cixinity Commissioner's Courts of Trials Corporating.

Appendix C

NON-RESPONSE SURVEY FORM

IF PERSON CANNOT/WILL NOT COMPLETE A MAIL SURVEY

I understand. In that case, could I ask you several very short and quick questions right now that would help us and only take two more minutes of your time ? IF NO.... I am sorry to have interrupted your evening. Thank-you. Good-bye. IF YES... Thank-you. Here's the first question: 1. How many times have you fished in T.I.F.T. before ?_____ 2. How many days did you fish in this tournament ? 1 3. How many family members or non-tournament fishing friends came with you ?____ 4. How many nights did you spend in the Port Isabel-So. Padre Is. ?____ 5. How much per day did you spend on the following items in So. Padre Is. ? Gas or Diesel for Auto Diesel/Gas and Oil for Boat Launch Fees or Boat Slip Fishing Tackle and Equipment Bait ____ Snack Foods, Beer and other Beverages _____ 6. About how much was spent in restaurants in the So. Padre Is. area ?_____ 7. About how much was spent for lodging ?____ 8. Do you own a boat ? YES NO If yes, what length is it ?____ 9. About how many days did you fish in 1982 ?____ 10. And finally, may I ask your age ?_____ Thank-you on behalf of T.I.F.T. and myself for taking the time to talk with me.

Appendix D NON-RESPONDENT EXPENDITURES

Appendix D-1. Average Daily Expenditures by Type of Purchase and Total Amount Spent by Non-respondent Bay Division Participants (N = 34)

Type of Purchase	Average Amount Spent Daily	Total Expenditures During Tournament ¹
Lodg i ng ²	53.57	1,821
Restaurant meals ²	31.71	1,078
Snacks, beer, beverages	14.43	1,472
Fishing tackle and equipment	4.57	466
Gas and oil for boat	16.86	1,720
Gas for auto	6.43	656
Other ³		
Ice	4.14	422
Bait	0.00	0
Launch fees or boat slip	.14	14
Tota!		\$7,649

¹ All expenditures made in South Padre Island area

² Average amounts are per non-respondent for the full tournament, rather than per day

³ Expense for "other" was not asked in non-response check

Appendix D-2. Average Daily Expenditures by Type of Purchase and Total Amount Spent by Non-respondent Offshore Division Participants (N = 192)

Type of Purchase	Average Amount Spent Daily	Total Expenditures During Tournament ^a
Gas for auto	3.79	1,979
Gas and oil for boat	129.92	67.849
Launch fees or boat slip	4.38	2,287
Fishing tackle and equipment	29.88	15,605
Bait	1.50	793
Ice	8.67	4,528
Snacks, beer, beverages Other ²	30.54	15,949
Restaurant meals:	188.00	36.096
Lodg i ng ³	150.70	28,934
Total		\$174,020

All expenditures made in South Padre Island area

² Average amounts are per non-respondent for the full tournament, rather than per day

³ Expense for "other" was not asked in non-response check

Appendix D-3. Amount Spent in the South Padre Island Area by Non-Cameron County Non-respondent Bay Division Fishermen (N = 19)

Type of Purchase	Average Amount Spent Daily	Total Expenditures During Tournament
Lodging	0.00	0
Restaurant meals ¹	35.50	675
Snacks, beer, beverages	16.50	942
Gas and oil for boat	10.75	612
Fishing tackle and equipment	5.50	315
Bait	0.00	Ö
Gas for auto	8.00	456
Ice	2.75	156
Launch fees or boat slip	0.00	0
Other ²		
Total		\$3,156

Average amounts are per non-respondent for the full tournament, rather than per day

² Expense for "other" was not asked in non-response check

Appendix D-4. Amount Spent in the South Padre Island Area by Non-Cameron County Non-respondent Offshore Division Fishermen (N = 138)

Type of Purchase	Average Amount Spent Daily	Total Expenditures Buring Tournament
Lodg i ng ¹	168.59	23,265
Gas and oil for boat	116.06	43,564
Restaurant meal ¹	171.29	23,638
Snacks, beer, beverages	33.47	12,563
fishing tackle and equipment	20.59	7,729
lce	9.59	3,600
Launch fees or boat slip	3.88	1,456
Gas for auto	4.18	1,569
Other ^a		
Bait	1.53	574
Total		\$117,958

Average amounts are per non-respondent for the full tournament, rather than per day

Expense for "other" was not asked in non-response check