

FINANCIAL ASPECTS OF LOUISIANA SHRIMP VESSELS, 1978

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The excellent shrimp harvests of 1977 and 1978 have brought increased interest in shrimp vessels as investment opportunities. Adding to investor interest in 1978 were the favorable prices and record dock-side value of shrimp (the previous record value was exceeded by 16 percent). Shrimpers and other investors will respond to the record earnings by constructing new vessels. Financial incentives such as the Capital Construction Fund (CCF) and the sheltering of capital gains from vessel appreciation also attract investment. The CCF and capital gains incentives are long-term, but the shrimp harvests vary from year to year. The result is that investment in the form of vessels drawn into the fishery due to tax incentives will negatively impact earnings per vessel when catches and prices return to normal. This may result in stress of the credit system and shrimp management alternatives, as well as bring about public assistance to help an ailing industry.

There is a sparse information base on the financial condition of Louisiana shrimp vessels on which to measure change. This publication was developed from personal interviews of 129 operators or owners of shrimp vessels. Interviews that were conducted in the winter and spring of 1979 dealt with the 1978 calendar year. Shrimpers in 1978 essentially harvested the same quantity of shrimp as the record year of 1977. The 1978 prices were higher than 1977, resulting in a record shrimp value. The financial condition of shrimp vessel businesses in 1978 should then be considered above average. This caution is necessary to the proper interpretation of the information. The financial condition of shrimp vessels in 1978 may be hard to improve on as shrimp catches retreat from record levels, more vessels begin shrimping, and costs continue to increase.

Louisiana Vessels

The financial condition of shrimp vessels is difficult to portray. Although the vessels included in the report are Coast Guard documented, there is a wide range in vessel length, horsepower, size of nets, days shrimped, and other factors. Vessels must be grouped in a manner that represents popular vessel and gear combinations.

The 1,003 licensed Louisiana residents with Coast Guard documented shrimp vessels in 1978 were divided into three groups. Small (50 ft or less), medium (51-65 ft), and large (more than 65 ft) classes were established. These groups are representative of three vessel types that can be distinguished in Louisiana. The large inshore shrimp harvest in Louisiana creates the situation of vessel captains dividing their time between the inshore and offshore waters when deciding where to shrimp. In any year or season catch rates will vary between inshore and offshore areas. Offshore areas consistently produce a larger more valuable

shrimp (Sass 1979). Shrimpers consider the ability of their boat to work the shallow inshore waters, the difference in inshore-offshore catch rates, and differential in prices when planning trips. Thus, any discussion of the financial condition of Louisiana shrimp vessels must identify the basis on which the information was developed. The shrimp vessel budgets were developed for the three vessel groups with the percentage of days fished inshore, age of the vessel, days fished, horsepower, and net size all identified.

Catch Composition

Shrimpers were asked to allocate their time spent shrimping in 1978 between inshore and offshore. The financial budgets are based on the average response to the percent of time shrimped inshore. Small vessels in 1978 averaged 43 percent of their time in inshore waters. The medium and large vessel groups averaged 17 and 0 percent inshore respectively.

The size of shrimp harvested in the two areas over fourteen years, 1963-76, indicates the extent of difference that the inshore and offshore shrimping produces. Approximately 84 percent of the inshore shrimp were 51 count and above (Sass 1979). These small shrimp amounted to only 31 percent of the offshore catch during the period. Even though the inshore vessel catch is primarily 51-67 count shrimp and shrimp 68 count and smaller, all vessels working inshore do not catch the same size mixture of shrimp. The difference in the count sizes of shrimp caught by small and medium vessels operating inshore was significant enough to have resulted in a difference in the average price the vessels received for the inshore portion of the catch. The 1978 price for the inshore portion of the small vessel group was \$1.21 per pound heads-off. The offshore catch of these small vessels occurs near shore. This nearshore catch averaged \$1.69 per pound. Vessels in the medium group averaged \$1.67 and \$2.65 for their inshore and offshore catch, respectively. The much higher offshore price reflects the fact that these vessels operate further offshore to harvest a larger shrimp than do the small vessels. Vessels larger than 65 feet did not shrimp inshore in 1978. Review of the fourteen years, 1973-76, revealed that this conclusion, based on the interviews, reflected the distribution of large vessel effort accurately. Large vessels shrimped deeper waters further from shore to harvest larger shrimp with an average value of \$3.14 per pound.

This lengthy description of areas shrimped, catch composition and shrimp prices was necessary to point out the complexity of depicting a shrimp vessel's financial condition. Discussion of vessel economics without regard for inshore and offshore allocation of time by shrimpers and the differences in count sizes of the catch even within the inshore-offshore designation will lead to inaccurate findings. The total revenue aspect of shrimp vessel businesses is therefore a complex matter requiring thorough treatment by researchers and investors.

Expenses

The expense of owning and operating shrimp vessels was separated

into three segments. Various expenses were (1) attributed to producing effort (shrimping days), (2) associated with the catch of shrimp and (3) the result of the overhead of owning a shrimp vessel. Expenses related to effort include fuel, oil, groceries, repairs, and supplies. Some of the expenses related to effort are deducted from the gross revenue of each trip prior to determining the payment to crew members for their labor. Labor payments and associated unemployment taxes are the expenses related to the catch. An explanation of the various methods of determining crew member payments can be found in Sass and Roberts (1979). Fixed expenses such as interest, depreciation, drydock charges, and insurance comprise the overhead segment of the financial budget.

The mixture of owner-operators and hired captains in the sample of interviewed shrimpers required that the charge for the captain's labor be reported as if all captains were hired. With this procedure the surplus of gross revenue over the three expense categories and fair compensation to a captain could be viewed as return to an owner's management and investment. The fair payment to the captain represents compensation for his labor and management of the vessel's daily operations. Any surplus after all expenses are deducted would represent a return for the owner's annual management of his investment. This is applicable regardless of whether the owner is also the operator or hires a captain.

Financial Budgets

The three financial budgets and descriptions for the vessels are identified in Tables 1-3. It is essential to recall the foundation on which the budgets were developed. The Louisiana shrimp fleet is so complex as to make the budgets that are developed without regard for differences in vessel size, inshore and offshore size of shrimp, size of shrimp harvested by vessels and price, misleading.

The 37 small vessels included in Table 1 on the average did not produce a positive return on investment. When all three vessel groups are compared, the medium vessel group generated the more favorable percentage return on investment. Investment in this treatment was considered to be represented as the market value of the vessel.

The average trawl size refers to the size of one trawl on a double-rigged vessel. Consequently, the total length of trawl footrope pulled when offshore was double the reported trawl size. Louisiana law restricts shrimpers to the use of a single trawl not to exceed 50 feet when trawling inshore. The average vessel value depicts the fair market value estimated by the shrimpers interviewed. Total days absent from port was not used to depict shrimping effort. The figure used in the tables represents days in which shrimping was conducted. No method was available to convert the days shrimped figure to 24-hour shrimping days. As vessel size increases and offshore shrimping dominates a vessel's activities, the number of hours per day shrimped that the trawl is in the water increases. Finally, the total pounds produced are heads-off pounds caught in calendar 1978.

The fixed expense averages of Tables 1-3 need elaboration for proper interpretation of the budgets. The figures represent averages for those shrimpers reporting expenses for the item. For example, only three shrimpers of 37 interviewed in the small category had insurance policies on the vessel. The average expense was \$2,200. Ten of 48 shrimpers in the medium category had insurance payments. The insurance expense was \$3,675. A far higher proportion, 37 of 44 shrimpers in the large category, bought insurance. Insurance is normally required by lenders. The low average age of the vessels in the large vessel category suggests that many of the vessels have loans outstanding. A majority of the vessels that fit the small and medium description were receiving returns \$2,200 and \$3,675 higher, respectively, than indicated in Tables 1 and 2. However, an individual purchasing a shrimp vessel with borrowed money would experience the situation reflected in the tables.

Table 4 compares expenses of the vessels. The payment of crewmen on medium vessels calculated as a percentage of total expenses was highest of the groups. Vessels in the medium category are evidently too large to operate with one crew member as is customary in the small vessel category and not large enough to consistently work the far offshore waters for more valuable shrimp as do the large vessels. The medium vessels may be better insulated from the effects of rising diesel fuel prices. Fuel prices increased approximately 88 percent from 1978 to 1979. It cost large vessels in 1978 approximately \$100 more than medium vessels to produce a day of fishing effort. Abruptly rising fuel costs will then affect vessels accustomed to shrimping areas far from the home port. Large vessels are more likely to shrimp in deep water and travel to adjoining states. Both shrimping strategies result in the use of more fuel.

In comparing the vessel groups, the large vessels generated more returns to the owners management and investment than either of the other groups. When the return to investment is calculated on the basis of percentage return to the market value of the vessel, different results occur. The middle group of vessels, 51-65 feet, averaged a 24 percent return on the market value of investment. Large vessels averaged a 10 percent return to owner investment. The figures represent only one year. Additional information would be necessary to understand the impact on vessel earnings of a lower shrimp catch, lower or higher ex-vessel prices, and increased cost of fishing. It is possible to have a relatively good inshore season and poor offshore season and vice versa. Shrimp prices may not change uniformly from one year to the next. Strength or weaknesses may be experienced in certain segments of the count size range and not in others.

It should also be recognized that the small inshore vessels may not be managed in a manner that directs financial resources to the best opportunity. Commercial shrimpers operating these vessels are primarily owner operators who may not be carrying a vessel mortgage and paying for insurance. A crew member may actually be a spouse or child. Consequently, the shrimper may view the ownership of a vessel as a means of providing a preferred life style and not as an investment.

Literature Cited

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Table 1. Financial budget for small (<50 ft) Louisiana shrimp vessels in 1978.*

Total Pounds Caught (heads-off)		28,825
Gross Revenue		\$42,610
Expenses Associated with Catch:		
Crewshare	\$11,501	
Federal unemployment tax	<u>212</u>	
		\$11,713
Expenses Associated with Effort:		
Fuel	4,215	
Ice	2,452	
Groceries	2,320	
Supplies	2,008	
Repairs	1,510	
Oil	<u>333</u>	
		12,838
Overhead Expenses:		
Insurance	2,200	
Interest	1,511	
Drydock	1,260	
Depreciation	<u>920</u>	
		<u>5,891</u>
Total Expenses		30,442
Return to Labor, Management and Investment		12,168
Compensation to Captain Plus Employment Tax		12,561
Return to Owner's Management and Investment		\$ - 393

*Description of the average small (<50 ft) Louisiana shrimp vessel:

Average length	47 ft	Average age	15 yrs
Average trawl size	44 ft	Average market value	\$42,700
Average horsepower	169	Average days shrimped	115

43% of the 115 days shrimped were inshore.

Table 2. Financial budget for medium (51-65 ft) Louisiana shrimp vessels in 1978.*

Total Pounds Caught (heads-off)		38,285
Gross Revenue		\$94,409
Expenses Associated with Catch:		
Crewshare	\$30,162	
Federal Unemployment Tax	<u>320</u>	
		30,482
Expenses Associated with Effort:		
Fuel	\$ 7,557	
Groceries	3,216	
Ice	3,151	
Repairs	3,067	
Supplies	3,043	
Oil	<u>656</u>	
		20,690
Overhead Expenses:		
Insurance	\$ 3,675	
Interest	1,783	
Drydock	1,637	
Depreciation	<u>1,290</u>	
		<u>8,385</u>
Total Expenses		59,557
Return to Labor, Management and Investment		34,852
Compensation to Captain Plus Unemployment Tax		18,708
Return to Owner's Management and Investment		\$16,144

*Description of the average medium (51-65 ft) Louisiana shrimp vessel:

Average length	58 ft	Average age	20 yrs
Average trawl size	50 ft	Average value	\$67,469
Average horsepower	222	Average days shrimped	136

17% of the 136 days shrimped were inshore.

Table 3. Financial budget for large (>65 ft) Louisiana shrimp vessels in 1978.*

Total Pounds Caught (heads-off)		53,006	
Gross Revenue		\$166,439	
Expenses Associated with Catch:			
Crewshare	\$45,328		
Federal Unemployment Tax	<u>461</u>		
		45,789	
Expenses Associated with Effort:			
Fuel	25,953		
Supplies	7,529		
Groceries	5,583		
Repairs	5,202		
Ice	4,346		
Oil	<u>618</u>		
		49,231	
Overhead Expenses:			
Interest	8,087		
Insurance	7,158		
Depreciation	5,070		
Drydock	<u>4,634</u>		
		<u>24,949</u>	
Total Expenses		119,969	
Return to Labor, Management and Investment		46,470	
Compensation to Captain Plus Unemployment Tax		25,003	
Return to Owner's Management and Investment		\$21,467	
*Description of the average large (>65 ft) Louisiana shrimp vessel:			
Average length	78 ft	Average age	9 yrs
Average trawl size	58 ft	Average value	\$214,837
Average horsepower	365	Average days shrimped	195
Large vessels did not shrimp inshore.			

Table 4. Expenses of three groups of Louisiana shrimp vessels, 1978.

	≤50 ft		51-65 ft		>65 ft	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Cost Related To:						
Catch*	11,713	39	30,482	51	45,789	38
Effort	12,838	42	20,690	35	49,231	41
Fixed Cost	<u>5,891</u>	19	<u>8,385</u>	14	<u>24,949</u>	21
Total Cost	\$30,442		\$59,557		\$119,969	
Days Fished	115		136		195	
Effort Cost/Day	\$112		\$152		\$252	
Total Cost/Day	\$265		\$438		\$615	

*Does not include compensation to the captain. This method is necessary due to the mixture of owner-operators and hired captains.

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