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Economics of the Federal Gulf Shrimp Fishery - 2012

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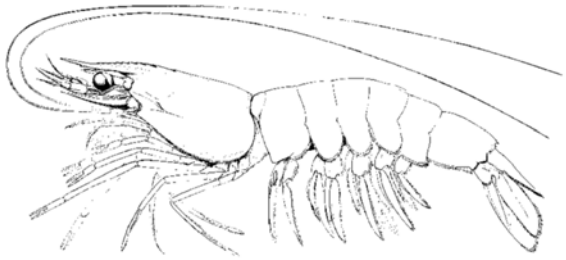
Christopher Liese



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December 2014

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http://www.sefsc.noaa.gov/socialscience/shrimp.htm

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This report is formatted for double sided printing (tables spanning two pages).

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Federal Gulf Shrimp Fishery

This report presents results of the Annual Economic Survey of Federal Gulf Shrimp Permit Holders for the calendar year 2012. The report provides fishermen, fishery managers, other constituents, and the public with an overview of the financial and economic health of the federal Gulf of Mexico shrimp fishery. The commercial shrimp fishery in the Gulf of Mexico is one of the most economically important fisheries in the Southeast region. In 2010, the fishery was materially affected by the Deepwater Horizon (DWH) oil spill and BP's various responses.

Shrimp Landings and Revenue

In 2012, total landings of shrimp for human consumption in Gulf of Mexico ports were just under 137 million pounds (head-off weight) (Table 1). At an average ex-vessel price of $2.91 per pound, total revenue was $399 million. The total number of vessels landing shrimp in 2012 decreased by 2% from 2011. Landings and revenue decreased by 1% and 8%, respectively. (The bait shrimp fishery in the Gulf is not accounted for in Table 1.)

Table 1: Total Gulf Shrimp Landings & Revenue by Vessel Permit Status

	No Federal Permit	Federal Permit	Total
Number of active vessels	4,002	1,150	5,152
Total landings (lbs, head off))	49 million	88 million	137 million
Total revenue ($)	103 million	296 million	399 million
Average price ($/lb)	2.11	3.35	2.91
% of total revenue	25.9%	74.1%	100%

Permits and Vessels

Approximately 5,152 vessels participated in the Gulf shrimp fishery in 2012. Broadly, the Gulf's shrimp fleet consists of an inshore segment, very diverse and mostly active in state waters, and an offshore segment, largely active in federal waters and almost always using otter trawl gear. We delineate the two segments through ownership of the federal shrimp permit.

The commercial shrimp fleet that operates in federal waters of the Gulf is managed under the Gulf of Mexico Shrimp Fishery Management Plan, and a limited-access permit is required to harvest shrimp in federal waters. In 2012, there were approximately 1,527 vessels that held a federal Gulf shrimp permit---the SPGM-permitted fleet. Only about 1,150 of these actively landed Gulf shrimp in 2012; yet they still accounted for 74.1% of total ex-vessel revenue generated by the Gulf food shrimp fishery (Table 1). The non-federally-permitted fleet, about 4,002 vessels, generated only 25.9% of total food shrimp revenue, due to their smaller vessel sizes and a higher count/lower price shrimp product. Shrimp vessels operating offshore are usually larger, full-time, and more sophisticated from a business perspective. This report is focused on the federally-permitted Gulf shrimp fleet only.

Vessels in this fleet are, on average, 67 feet long, weigh 102 gross tons, are powered by 538 hp motor(s), and are 27 years old. Nearly three-quarter of the vessels have steel hulls and 57% use a freezer for refrigeration. The owners of these vessels reside predominantly in Texas (37%) and Louisiana (28%), followed by Florida (15%), Mississippi (8%), and Alabama (7%). Six percent of owners reside outside the Gulf of Mexico region.

Annual Economic Survey of Federal Gulf Shrimp Permit Holders

Data Collection

A two-page, self-administered, mail survey (OMB Control # 0648-0591) is sent annually to a third of the population of permit holders. The survey collects annual expenditures grouped into categories of variable costs (e.g., fuel, crew) and fixed costs (e.g., insurance, overhead). When combined with revenue from other data collections, the financial and economic status and performance of the industry can be documented. An earlier technical memorandum (NMFS-SEFSC-601) describes in detail the data collection methodology and should be consulted for details about the survey design, data processing, and definitions. The memorandum and the survey questionnaire are available at: www.sefsc.noaa.gov/socialscience/shrimp.htm

The population of interest is composed of all vessels with an SPGM permit, including both active and inactive vessels. In early 2013, 557 vessels were randomly selected from the population, stratified by state, of approximately 1,527 vessels with permits to shrimp in federal waters of the Gulf. Of the 557 surveys that were sent out, 472 completed surveys were returned. After adjusting for 24 sampled vessels that were deemed ineligible because their permits were sold or terminated, a response rate of 89% was achieved (472/533). Due to problems linking cost and revenue datasets, the final number of observations used in the analyses is 442 (79% of the sample; 29% of the population).

Results

The financial and economic analysis is based on an accounting framework of money flows and values associated with the productive activity of commercial shrimping. The results presented are vessel averages which apply to a typical or representative vessel in a given fleet. Results based on different fleet definitions provide different perspectives on the fishery. Some vessels owning federal Gulf shrimp permits are engaged in other fisheries, including the South Atlantic shrimp and non-shrimp fisheries. In this report, economic results are presented for four fleets (which are not mutually exclusive!):

- A - SPGM-permitted fleet: Commercial fishing vessels holding a federal Gulf shrimp permit
- B - Gulf shrimp fleet: Commercial shrimp vessel inactive or active in the Gulf shrimp fishery
- C - Active Gulf shrimp fleet: Shrimp vessel reporting landings in the Gulf shrimp fishery
- D - Inactive Gulf shrimp fleet: Idle commercial shrimp vessels not fishing in 2012

Results for other fleets are reported in the Appendix. In the Appendix, results are presented in a standardized table format that links vessel characteristics and operations to simple financial statements, including balance sheet, cash flow, and income statements. Compared to the full SPGM-permitted fleet, the Gulf shrimp fleet excludes 14 vessels that are only active in non-shrimp fisheries and 11 vessels that are only active in the S. Atlantic shrimp fishery (or inactive in one case). Results are reported by State for the SPGM-permitted fleet, the Gulf shrimp fleet, and the active Gulf shrimp fleet, where Alabama and Mississippi are combined due to their small sample size. Results for the active Gulf shrimp fleet are also reported according to whether the vessel is operated by the owner or a hired captain and whether or not the captain is paid a separate share, as well as broken out by those receiving DWH-related payments and those who are not.

Economics of the Federal Gulf Shrimp Fishery

A. Economic Status of the SPGM-Permitted Fleet

In 2012, 1,527 vessels had a federal Gulf shrimp permit (SPGM). The results below are based on a random sample of 442 permits from this population with complete and usable surveys. Tabulated results for this fleet can be found in the Appendix, Table 3, column 1. The sample's vessel characteristics are not materially different from the population of vessels with Gulf shrimp permits (page 1). The geographic distribution of the permit owners' residence across Florida, Alabama and Mississippi, Louisiana, Texas, and outside the Gulf region (Other) is provided in Figure A1.

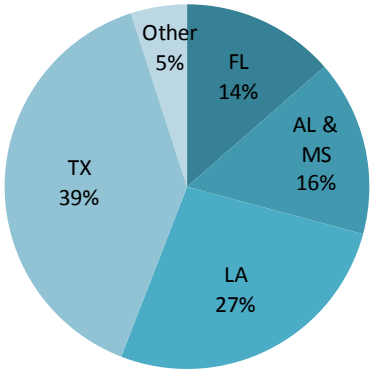


Figure A1: State of Residency of Owner

Balance Sheet

The average market value of a vessel (including fishing permits) was $290,047 in 2012, about $16,000 more than the original purchase price. The average vessel had $49,619 of liabilities, and only 32% of the vessels had an outstanding loan. This implies an average equity of $240,428 for each owner and a debt to equity ratio of 21%. Only 46% of the vessels had insurance. The average implicit value of a vessel's fishing permits was $83,695. The high value largely reflects the ownership of the very valuable Atlantic scallop permit by a few vessels in the sample. The value of the limited-access federal Gulf shrimp permit might account for roughly a quarter of that value.

Table A1: Shrimp Landings, Price, and Revenue and Other Revenue per Vessel

	Landings (lbs, head-off)	Price ($ per lb)	Revenue ($)
Shrimp	78,000	3.42	266,824
Non-shrimp	-	-	44,067
Government payments (shrimp related)	-	-	5,686
DWH-related payments	-	-	58,167

Revenue and Landings

In 2012, 86% of the vessels with SPGM permits landed shrimp. The average vessel landed 78 thousand pounds of shrimp, and the price per pound averaged $3.42 (Table A1). Each permitted vessel spent, on average, 140 days fishing for Gulf shrimp, and we estimate that the fleet generated fishing revenue of $7.50 (of which $6.44 was from shrimp) for each gallon of fuel used (a measure of fuel efficiency).

In 2012, average annual revenue from all sources was $376,962. As a percentage of revenue, shrimp landings accounted for 71%, non-shrimp landings for 12%, government payments for 1.5%, and payments related to DWH for 15.5% (Figure A2).

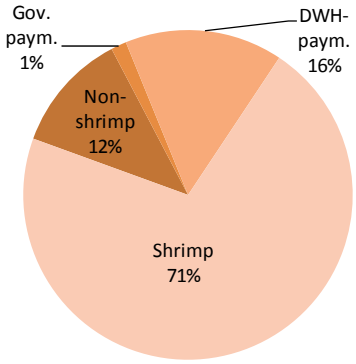


Figure A2: Revenue by Fishery

Costs of Commercial Fishing

In 2012, average annual expenses for operations were $305,427, where operations refer to commercial fishing activities. Operating expenses include both variable costs, usually paid on a trip basis, and fixed costs, such as insurance. The average vessel used 41,428 gallons of fuel, and

the average gallon of fuel was purchased for $3.25 in 2012. Fuel accounted for 44% of operating expenses, while other supplies accounted for 8%, leading to a total of 52% for non-labor variable costs (Figure A3). The expense for hired crew and captains was, on average, $76,264, or 25% of expenses, which indicates the importance of the industry as a source of wage income. Of the vessels, 51% were owner operated, and we estimated that the average owner operator's contribution *as captain* was about $20,000 per year ("opportunity cost of time"). Overall, labor accounted for 28% of operating expenses. Fixed costs accounted for the remaining 20% of operating expenses, split among maintenance (34%), major repairs (15%), estimated depreciation (15%), insurance (13%), and overhead (23%).

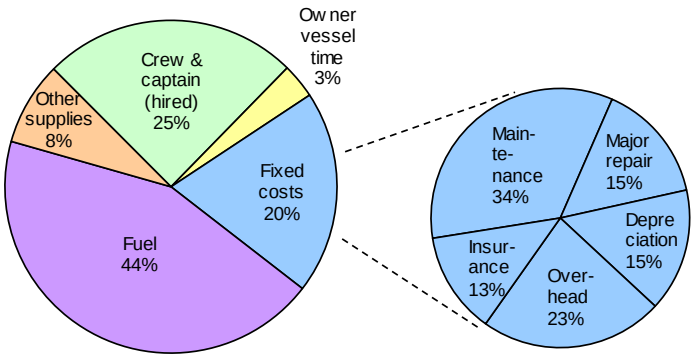


Figure A3: Percentage Breakup of Total Costs and Fixed Costs

Additional expenses in 2012, not counted as operating expenses, included interest payments of $3,006 (financing costs), principal payments of $11,182 (paying down debt), and new investment of $3,929 (beyond maintenance and repair). Tabulated results for this fleet can be found in the Appendix, Table 3, column 1.

Financial Performance

For the average vessel, the difference between total revenue and total expenses---the net cash flow---is on average $69,315 (Figure A4). This is a measure of the industry's liquidity and should usually be positive in an established industry. In 2012, it is clearly increased due to DWH-payments. Cash flow does not account for owner operators' labor contribution or the vessels' depreciation. The difference between revenue from commercial fishing operations and operating expenses---net revenue from operations---is on average $3,929, which accounts for all costs of production. Finally, when financing costs are subtracted and non-operational income (government and DWH payments) is added, the average profit for each owner is $64,775.

Figure A4: Net Cash Flow, Net Revenue, Profit

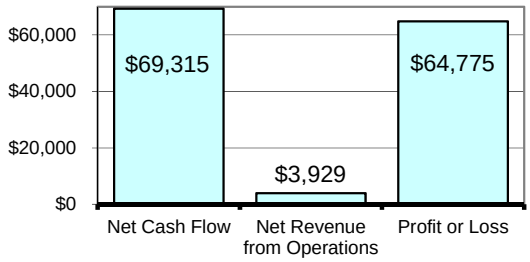
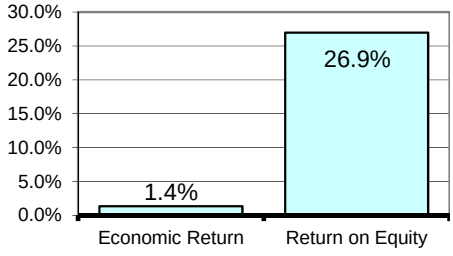


Figure A5: Financial Returns



An average economic return of 1.4% is calculated by dividing net operating revenue by the value of vessel assets (Figure A5). Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity of 26.9% is calculated by dividing the profit by the equity currently invested by the owner in the vessel.

Performance does vary substantially by state (Appendix, Table 4). On average, vessels from outside the Gulf region generate 86% of their revenue from non-shrimp landings and generate a decent economic return (15%). Vessels from Louisiana are making large losses (-11.2%), while average losses for vessels from Florida and Alabama and Mississippi are smaller (-2.2% and -3.6%). Texas' vessels almost break even (economic return of -0.2%).

B: Economic Status of the Gulf Shrimp Fleet (with SPGM permit)

This section reports results for the *Gulf shrimp* vessels only, by excluding permitted vessels belonging to the S. Atlantic shrimp fleet and non-shrimp fleets. Of the 1,527 vessels with SPGM permits, an estimated 1,421 were active or idle *Gulf shrimp* vessels. The results below are based on 417 complete and usable surveys randomly sampled from this population. Tabulated results for this fleet can be found in the Appendix, Table 3, column 4. The sample's vessel characteristics are not materially different from the population of vessels with Gulf shrimp permits (page 1). The geographic distribution of the permit owners' residence across Florida, Alabama and Mississippi, Louisiana, Texas, and outside the Gulf region (Other) is provided in Figure B1.

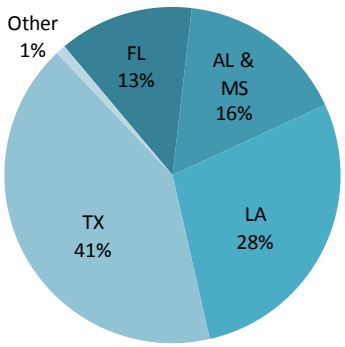


Figure B1: State of Residency of Owner

Balance Sheet

The average market value of a vessel (including fishing permits) was $220,909 in 2012, about $46 thousand less than the original purchase price. The average vessel had $44,889 of liabilities, and 32% of the vessels had an outstanding loan. This implies an average equity of $176,020 for each owner and a debt to equity ratio of 26%. Only 45% of the vessels had insurance. However, because newer, more valuable vessels were more likely to have insurance, 55% of total asset value was insured. The average implicit value of a vessel's fishing permits was $22,329, about a fourth of the value for the total SPGM-permitted fleet. Nonetheless, this estimate is probably influenced by the ownership of non-SPGM permits because SPGM permits were still being allowed to terminate by their owners throughout 2013. The median value of $10,000 is closer to the anecdotally reported amount.

Table B1: Shrimp Landings, Price, and Revenue and Other Revenue per Vessel

	Landings (lbs, head-off)	Price ($ per lb)	Revenue ($)
Shrimp	81,067	3.41	276,534
Non-shrimp	-	-	3,186
Government payments (shrimp related)	-	-	5,959
DWH-related payments	-	-	61,001

Revenue and Landings

In 2012, 89% of the permitted *Gulf shrimp* vessels landed shrimp. The average vessel landed 81 thousand pounds of shrimp, and the price per pound averaged $3.41 (Table B1). Each permitted vessel spent, on average, 149 days fishing for Gulf shrimp, and we estimate that the fleet generated fishing revenue of $6.66 for each gallon of fuel used (a measure of fuel efficiency).

In 2012, average annual revenue from all sources was $346,681. As a percentage of revenue, shrimp landings accounted for 80%, payments related to DWH for 17%, government payments for 2%, and non-shrimp landings for only 1% (Figure B2). This implies that the federally-permitted Gulf shrimp fleet is very specialized.

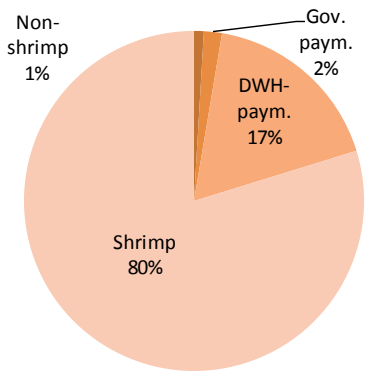


Figure B2: Revenue by Fishery

Costs of Commercial Fishing

In 2012, average annual expenses for operations were $289,513, where operations refer to commercial fishing activities. Operating expenses

include both variable costs, usually paid on a trip basis, and fixed costs, such as insurance. The average vessel used 42,029 gallons of fuel, and the average gallon of fuel was purchased for $3.24 in 2012. Fuel accounted for 47% of operating expenses, while other supplies accounted for 8%, leading to a total of 55% for non-labor variable costs (Figure B3). The expense for hired crew and captains were on average $62,215, or 21% of expenses, which indicates the importance of the industry as a source of wage income. Of the vessels, 52% were owner operated, and we estimate that the average owner operator's contribution *as captain* was about $20,000 per year ("opportunity cost of time"). Overall, labor accounted for 25.1% of operating expenses. Fixed costs accounted for the remaining 19.5% of operating expenses, split among maintenance (35%), major repairs (15%), estimated depreciation (16%), insurance (12%), and overhead (23%).

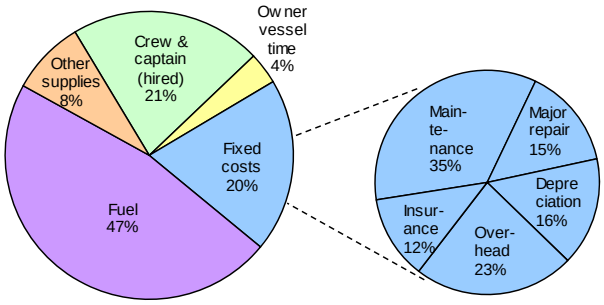


Figure B3: Percentage Breakup of Total Costs and Fixed Costs

Additional average expenses in 2012, not counted as operating expenses, included interest payments of $2,848 (financing costs), principal payments of $10,285 (paying down debt), and new investment of $4,028 (beyond maintenance and repair). Tabulated results for this fleet can be found in the Appendix, Table 3, column 4.

Financial Performance

For the average vessel, the difference between total revenue and total expenses---the net cash flow---is on average $59,185 (Figure B4). This is a measure of the industry's liquidity and should usually be positive in an established industry. In 2012, it is clearly increased due to DWH-payments. Cash flow does not account for owner operators' labor contribution or the vessels' depreciation. The difference between revenue from commercial fishing operations and operating expenses---net revenue from operations---is on average negative $9,792, which accounts for all costs of production. Finally, when financing costs are subtracted and non-operational income (government and DWH payments) is added, the average profit for each owner is $54,321.

Figure B4: Net Cash Flow, Net Revenue, Profit

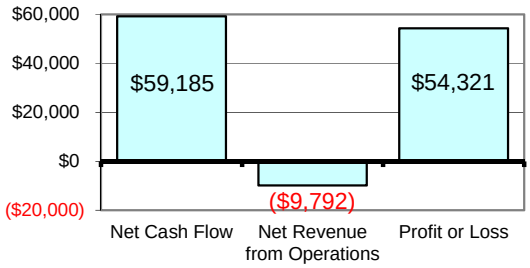
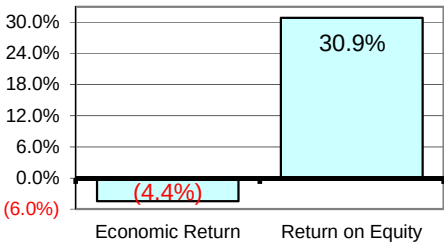


Figure B5: Financial Returns



An average economic return of negative 4.4% is calculated by dividing net operating revenue by the value of vessel assets (Figure B5). Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity of 30.9% is calculated by dividing the profit by the equity currently invested by the owner in the vessel.

Performance does vary substantially by state (Appendix, Table 5). On average, vessels from Texas almost break even (negative 0.2% return); Alabama and Mississippi and Florida vessels are making losses (negative 3.7% and 7%, respectively); and Louisiana vessels are making large losses (negative 11.2%).

C: Economic Status of the Active Gulf Shrimp Fleet (with SPGM permit)

In 2012, approximately 1,229 vessels with the SPGM permit landed shrimp in Gulf ports. The results below are based on 370 complete and usable surveys randomly sampled from the population. Tabulated results for this fleet can be found in the Appendix, Table 6, column 1. The active sample's average vessel characteristics are slightly larger than the population of vessels with Gulf shrimp permits. The geographic distribution of the permit owners' residence across Florida, Alabama and Mississippi, Louisiana, Texas, and outside the Gulf region (Other) is provided in Figure C1.

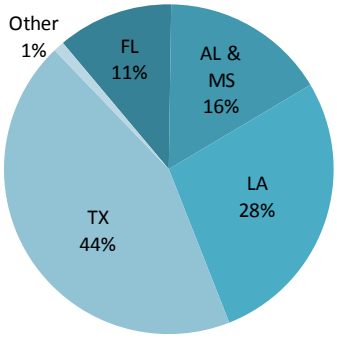


Figure C1: State of Residency of Owner

Balance Sheet

The average market value of a vessel (including fishing permits) was $237,889 in 2012, about $48 thousand less than the original purchase price. The average vessel had $49,780 of liabilities, and 35% of the vessels had an outstanding loan. This implies an average equity of $188,109 for each owner and a debt to equity ratio of 26%. Only 49% of the vessels had insurance. However, because newer, more valuable vessels were more likely to have insurance, 57% of total asset value was insured. The implicit permit value among the active Gulf shrimp fleet was $24,676, or less than a fourth of the value for the SPGM-permitted fleet. Nonetheless, this estimate is probably influenced by the ownership of non-SPGM permits because SPGM permits were still being allowed to terminate by their owners throughout 2013. The median value of $10,000 is closer to the anecdotally reported amount.

Table C1: Shrimp Landings, Price, and Revenue and Other Revenue per Vessel

	Landings (lbs, head-off)	Price ($ per lb)	Revenue ($)
Shrimp	91,365	3.41	311,662
Non-shrimp	-	-	3,591
Government payments (shrimp related)	-	-	6,620
DWH-related payments	-	-	66,487

Revenue and Landings

In 2012, by definition, 100% of the active permitted Gulf shrimp fleet landed shrimp. The average vessel landed 91 thousand pounds of shrimp, and the price per pound averaged $3.41 (Table C1). Each permitted vessel spent, on average, 169 days fishing for Gulf shrimp, and we estimate that the fleet generated fishing revenue of $6.66 for each gallon of fuel used (a measure of fuel efficiency).

In 2012, average annual revenue from all sources was $388,359. As a percentage of revenue, shrimp landings accounted for 80%, payments related to DWH for 17%, government payments for 2%, and non-shrimp landings were negligible (just under 1%) (Figure C2). This implies that the active federally-permitted Gulf shrimp fleet is very specialized, with very few vessels catching shrimp and non-shrimp in the same year.

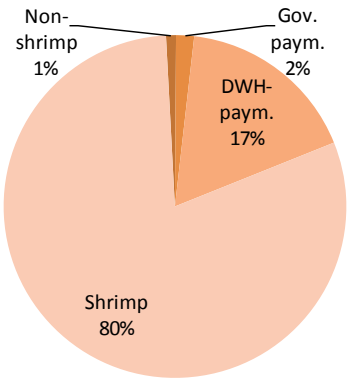


Figure C2: Revenue by Fishery

Costs of Commercial Fishing

In 2012, average annual expenses for operations were $325,117, where operations refer to commercial fishing activities. Operating expenses

include both variable costs, usually paid on a trip basis, and fixed costs, such as insurance. The average vessel used 47,367 gallons of fuel, and the average gallon of fuel was purchased for $3.24 in 2012. Fuel accounted for 47% of operating expenses, while other supplies accounted for 8%, leading to a total of 55.6% for non-labor variable costs (Figure C3). The expense for hired crew and captains was on average $70,118, or 21.6% of expenses, which indicates the importance of the industry as a source of wage income. Of the vessels, 51% were owner operated, and we estimate that the average owner operator's contribution *as captain* was about $23,000 per year ("opportunity cost of time"). Overall, labor accounted for 25.1% of operating expenses. Fixed costs accounted for the remaining 19% of operating expenses, split among maintenance (35%), major repairs (14%), estimated depreciation (15%), insurance (12%), and overhead (23%).

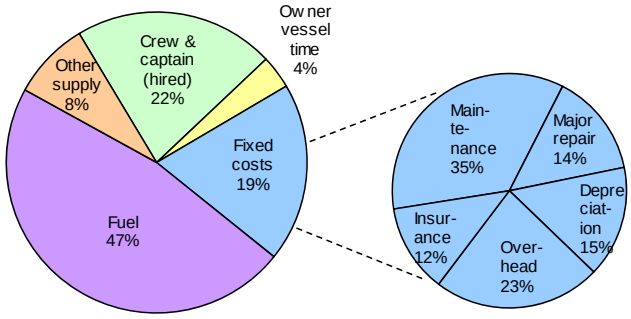


Figure C3: Percentage Breakup of Total Costs and Fixed Costs

Additional expenses in 2012, not counted as operating expenses, included interest payments of $3,180 (financing costs), principal payments of $11,543 (paying down debt), and new investment of $4,442 (beyond maintenance and repair). Tabulated results for this fleet can be found in the Appendix, Table 6, column 1.

Financial Performance

For the average vessel, the difference between total revenue and total expenses---the net cash flow---is on average $65,323 (Figure C4). This is a measure of the industry's liquidity and should usually be positive in an established industry. In 2012, it is clearly increased due to DWH-payments. Cash flow does not account for owner operators' labor contribution or the vessels' depreciation. The difference between revenue from commercial fishing operations and operating expenses---net revenue from operations---is on average negative $9,864, which accounts for all costs of production. Finally, when financing costs are subtracted and non-operational income (government and DWH payments) is added, the average profit for each owner is $60,063.

Figure C4: Net Cash Flow, Net Revenue, Profit

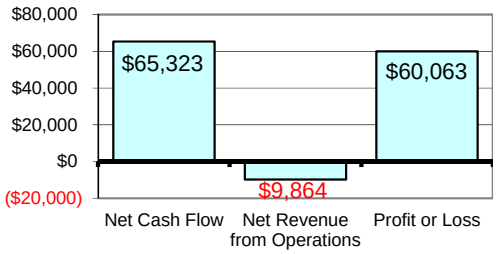
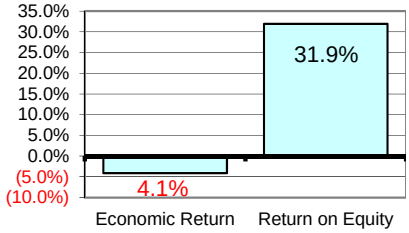


Figure C5: Financial Returns



An average economic return of negative 4.1% is calculated by dividing net operating revenue by the value of vessel assets (Figure C5). Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity of 31.9% is calculated by dividing the profit by the equity currently invested by the owner in the vessel.

Performance does vary substantially by state (Appendix, Table 6). On average, vessels from Texas break even (economic return 0.0%); vessels from Alabama and Mississippi and Florida are making losses (negative 3.6% and negative 5.9%, respectively); and Louisiana vessels are making large losses (negative 11.4%).

D: Economic Status of the Inactive Gulf Shrimp Fleet (with SPGM permit)

This section reports results for inactive commercial shrimping vessels in the Gulf. Of the estimated 1,421 vessels in the federally-permitted *Gulf shrimp* fleet, approximately 192 did not report any landings. The results below are based on 47 complete and usable surveys randomly sampled from the population. Due to the limited sample size, caution interpreting the numbers is warranted. Tabulated results for this fleet can be found in the Appendix, Table 5, column 5.

Average vessel characteristics of the sample of inactive vessels differ materially from the overall population of vessels with Gulf shrimp permits (page 1). The inactive vessels average only 48 feet long; 19 feet shorter than the population average. They also are on average 2 years older (built in 1985) and much less likely to be made of steel or use freezers as refrigeration. The geographic distribution of the permit owners' residence across Florida, Alabama and Mississippi, Louisiana, and Texas is provided in Figure D1. The distribution of the inactive Gulf shrimp vessels across the states is not proportional to the active vessels---with Louisiana and, especially, Florida vessels are more likely to be inactive, while Texas vessels are more likely to be active.

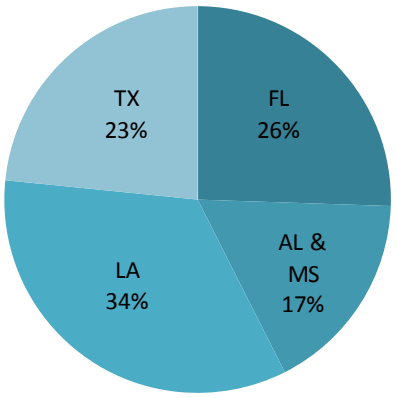


Figure D1: State of Residency of Owner

Balance Sheet

The average market value of a vessel (including fishing permits) was $87,231 in 2012, about $31 thousand less than the original purchase price. The average vessel only had $6,383 of liabilities as only 9% of the vessels had an outstanding loan. This implies an average equity of $80,848 for each owner and a debt to equity ratio of 8%. Only 9% of the vessels had hull insurance. The average implicit value of a vessel's fishing permits was $4,452. The vessel market value and purchase price are significantly less than for the active fleet, as is the owner's equity and the implicit permit price.

Revenue and Landings

In 2012, by definition, none of the inactive permitted Gulf shrimp fleet had any commercial landings. The only source of revenue was average government payments of $759 and DWH-related payments of $17,817.

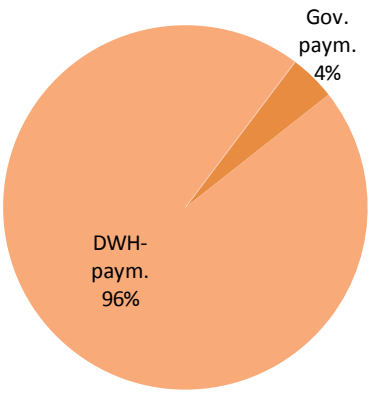


Figure D2: Revenue by Fishery

Costs

In 2012, average annual expenses for operations were $9,227, where operations refer to commercial fishing activities. Operating expenses include both variable costs, usually paid on a trip basis, and fixed costs, such as insurance. For the inactive fleet the activity amounts to the maintenance of fishing capacity.

Fuel accounted for 0.0% of operating expenses, while other supplies accounted for 0.1%, leading to negligible non-labor variable costs (Figure D3). There were no expenses for hired crew and captains. Of the vessels, 66% were owner operated (in principle) and owner operator's contribution as captain was estimated at $300.

Fixed costs accounted for the remaining 97.6% of operating expenses, split among maintenance (12%), major repairs (27%), estimated depreciation (30%), insurance (6%), and overhead (26%).

Additional expenses in 2011, not counted as operating expenses, included interest payments of $232 (financing costs), principal payments of $386 (paying down debt) and new investment of $768 (beyond maintenance and repair). Tabulated results for this fleet can be found in the Appendix, Table 5, column 5.

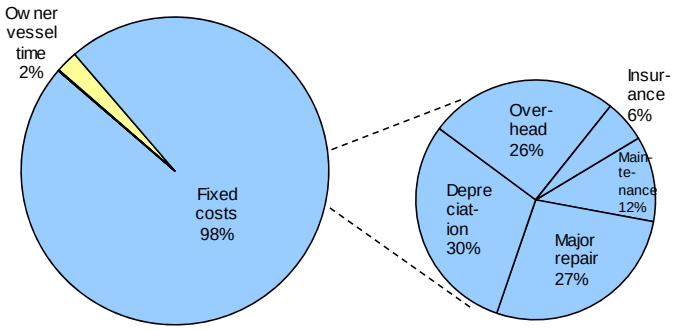


Figure D3: Percentage Breakup of Total Costs and Fixed Costs

Financial Performance

For the average vessel, the difference between total revenue and total expenses---the net cash flow---is on average $10,869 (Figure D4), largely due to DWH-payments. The difference between revenue from commercial fishing operations and operating expenses---net revenue from operations---is on average negative $9,223, which accounts for all costs of production. Finally, when financing costs are subtracted and non-operational income (government and DWH payments) is added, the average profit for each owner is $9,121.

Figure D4: Net Cash Flow, Net Revenue, Profit

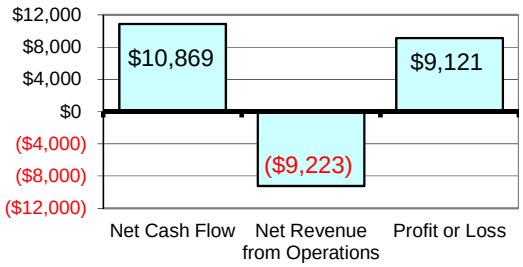
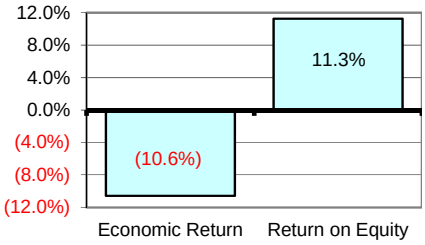


Figure D5: Financial Returns



An average economic return of negative 10.6% is calculated by dividing net operating revenue by the value of vessel assets (Figure D5). Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity of 11.3% is calculated by dividing the loss by the equity currently invested by the owner in the vessel.

The sample size is too low to warrant a breakout by state.

Summary

The economic data is collected to provide an overview of the financial and economic health of the federal Gulf of Mexico shrimp fishery. The economic condition of "the fishery" depends on how the population is defined, i.e., which vessels are included and which are not included in the "fleet". For the vessels in the SPGM-permitted fleet, the Gulf shrimp fleet, the active Gulf shrimp fleet, and the State sub-fleets of the latter, the average net cash flow was substantially positive (Table 2). We would generally expect to find a positive cash flow, but it is important to note that it is primarily driven by large payments relating to the DWH-oil spill, i.e., claims money. Due to this inflow of cash, even vessels inactive in 2012 had a positive cash flow ($11 thousand), quite different from previous years.

Table 2: Financial Results for the Average SPGM-permitted Vessel by Fleets (thousand dollars)

	# of Obs.	Assets	Equity	Net Cash Flow	Net Rev. from Operations	Profit or Losss	Economic Return	Return on Equity
SPGM-Permitted Fleet	442	290	240	69	4	65	1.4%	26.9%
Gulf Shrimp Fleet	417	221	176	59	(10)	54	(4.4%)	30.9%
Active Gulf Shrimp Fleet	370	238	188	65	(10)	60	(4.1%)	31.9%
Inactive Gulf Shrimp Fleet	47	87	81	11	(9)	9	(10.6%)	11.3%
Active Gulf Shrimp Fleet in:								
Florida	42	229	211	70	(14)	53	(5.9%)	25.4%
Alabama and Mississippi	60	348	297	132	(13)	133	(3.6%)	44.7%
Louisiana	102	202	172	85	(23)	69	(11.4%)	39.8%
Texas	162	218	151	28	0	30	(0.0%)	19.5%
Active Gulf Shrimp Fleet by:								
Receiving oil spill money	153	239	195	143	(27)	137	(11.4%)	70.2%
No oil spill money	217	237	183	10	2	6	1.0%	3.1%

Unlike the positive cash flow, if, in the income statement, only operational income from commercial fishing is considered, the average net revenues from operations and economic return are substantially negative for all but the SPGM-permitted fleet. The latter's profits, on average, are being made by vessels active in non-shrimp fisheries and not active in the Gulf shrimp fishery. For the active Gulf shrimp fleet an average economic return of negative 4.1% on the substantial financial and entrepreneurial capital invested in the average shrimping enterprise depicts an unhealthy industry. The quite high profit ($60k) and average return on equity of 31.9% by this fleet is due primarily to large DWH-related payments. Interestingly, when the active Gulf shrimp fleet is broken into those receiving DWH-related payments and those who are not, the operational results are quite divergent, with the former incurring larger costs and catching less shrimp than the latter (Appendix Table 8). It is possible that DWH-related costs (such as for lawyers) are somewhat obscuring the underlying economics of the *shrimp* fishery.

In summary, the results indicate that the commercial harvest of Gulf shrimp is currently, on average, not a profitable activity. These results are averages and hence hide the variation that clearly exists within all fleets. Many further caveats apply to these results, including the general difficulty of collecting economic data. Hence the results should only be viewed as tentative indicators of the general economic situation of the industry.

Appendix

Data Tables

Table 3: F&E Results: Averages for the SPGM-permitted Fleet by Fishery (2012)

	SPGM Permit Fleet	SPGM Permit Fleet		
	Fleet	Other Fish[1]	S. Atlantic Shrimp[1]	Gulf Shrimp
# of Observations	442	14	10	417
Vessel Characteristics				
Length (feet)	68	71	74	68
Gross tons	105	116	122	105
Horse power	547	588	598	545
Year built	1987	1988	1986	1987
Hull material - Steel	77%	71%	50%	78%
Refrigeration - Freezer	61%	50%	50%	61%
State of Owner - Florida	14%	14%	40%	13%
State of Owner - Alabama or Mississippi	16%	7%	0%	16%
State of Owner - Louisiana	27%	0%	0%	28%
State of Owner - Texas	39%	0%	0%	41%
State of Owner - Other	5%	79%	60%	1%
Balance Sheet (end of 2012)				
Assets - Market value of vessel and permit	**$290,047**	**$2,163,214**	**$579,700**	**$220,909**
Original value of vessel (purchase price)	*$274,037*	*$507,215*	*$272,500*	*$266,843*
Implicit permit value	*$83,695*	*$1,535,071*	*$303,556*	*$22,329*
Liabilities - Loan on vessel	**$49,619**	**$205,129**	**$34,104**	**$44,889**
% of vessels with loan	*32%*	*36%*	*20%*	*32%*
Equity - Owner's equity in vessel	**$240,428**	**$1,958,085**	**$545,596**	**$176,020**
Insurance coverage (% of vessels / % of assets)	*46% / 48%*	*79% / 29%*	*50% / 31%*	*45% / 55%*
Vessel Operation (2012)				
Owner-operator	51%	21%	50%	52%
Actively shrimping	86%	0%	100%	89%
Days at sea - Gulf shrimping	140	-	-	149
Shrimp landed (pounds)	78,000	0	67,091	81,067
Fuel use (gallons)	41,428	35,328	29,050	42,029
Fleet Averages				
Shrimp price ($ per pound)	3.42	-	3.91	3.41
Fuel price ($ per gallon)	3.25	3.59	3.36	3.24
Fuel efficiency I - Shrimp pounds per gallon	1.9	-	2.3	1.9
Fuel efficiency II - Shrimp revenue per gallon	6.44	-	9.02	6.58

(in USD unless otherwise noted)	SPGM Permit Fleet	SPGM Permit Fleet		
		Other Fish[1]	S. Atlantic Shrimp[1]	Gulf Shrimp
# of Observations	442	14	10	417
Cash Flow (2012)				
Inflow - Total	**374,742**	**1,193,100**	**436,663**	**346,681**
Shrimp revenue	266,824	0	262,114	276,534
Non-shrimp revenue	44,067	1,193,100	144,531	3,186
Government payments received (shrimp related)	5,686	0	2,808	5,959
DWH-related payments received	58,167	0	27,210	61,001
Outflow - Total	**305,427**	**829,913**	**349,422**	**287,496**
Fuel	134,810	126,848	97,630	136,292
Other supplies	24,880	52,939	18,445	24,152
Crew & captain (hired)	76,264	474,793	111,826	62,215
Regular maintenance (vessel and gear)	20,673	55,402	20,996	19,548
Major repair and haul-out	9,082	26,315	22,228	8,210
Insurance	7,702	30,901	12,939	6,816
Overhead	13,899	25,387	32,452	13,101
Interest payments made (on vessel loans)	3,006	9,524	805	2,848
Principal payments made (on vessel loans)	11,182	27,806	26,397	10,285
New investments and upgrades (in vessel)	3,929	0	5,703	4,028
Net Cash Flow (excluding taxes)	**69,315**	**363,187**	**87,241**	**59,185**
Non-Cash Cost Estimates (2012)				
Owner's vessel time	10,329	3,624	20,503	10,334
Depreciation	9,322	22,459	11,871	8,843
Income Statement (2012)				
Revenue from Operations	**310,890**	**1,193,100**	**406,645**	**279,721**
Costs of Operations	**306,962**	**818,667**	**348,891**	**289,513**
Variable costs - Non-Labor (fuel, supplies)	*52.0%*	*22.0%*	*33.3%*	*55.4%*
Variable costs - Labor (hired, owner)	*28.2%*	*58.4%*	*37.9%*	*25.1%*
Fixed costs (maint., repair, insure, overh., depreci.)	*19.8%*	*19.6%*	*28.8%*	*19.5%*
Net Revenue from Operations	**3,929**	**374,434**	**57,754**	**(9,792)**
Profit or Loss (before tax)	**64,775**	**364,910**	**86,968**	**54,321**
Fleet Returns (2012)				
Economic Return	1.4%	17.3%	10.0%	(4.4%)
Return on Equity	26.9%	18.6%	15.9%	30.9%

[1] These columns provide information on how vessels with federal Gulf shrimp permits but active in other fisheries are doing. They are in no way representative of these other fisheries. A companion report for the federal South Atlantic shrimp fisheries is available.

Table 4: F&E Results: Averages for the SPGM-permitted Fleet by State (2012)

	SPGM Permit Fleet				
	FL	AL+MS	LA	TX	Other
# of Observations	60	69	118	173	22
Vessel Characteristics					
Length (feet)	62	71	63	72	77
Gross tons	91	116	80	120	131
Horse power	445	633	496	570	648
Year built	1984	1989	1989	1986	1988
Hull material - Steel	33%	77%	81%	90%	77%
Refrigeration - Freezer	58%	61%	27%	84%	64%
State of Owner - Florida	100%	0%	0%	0%	0%
State of Owner - Alabama or Mississippi	0%	100%	0%	0%	0%
State of Owner - Louisiana	0%	0%	100%	0%	0%
State of Owner - Texas	0%	0%	0%	100%	0%
State of Owner - Other	0%	0%	0%	0%	100%
Balance Sheet (end of 2012)					
Assets - Market value of vessel and permit	**$204,281**	**$314,463**	**$189,504**	**$208,986**	**$1,624,091**
Original value of vessel (purchase price)	*$199,783*	*$379,552*	*$206,334*	*$279,633*	*$464,751*
Implicit permit value	*$18,800*	*$30,052*	*$13,340*	*$26,849*	*$1,150,714*
Liabilities - Loan on vessel	**$18,224**	**$44,357**	**$26,783**	**$63,404**	**$165,830**
% of vessels with loan	*12%*	*39%*	*25%*	*41%*	*32%*
Equity - Owner's equity in vessel	**$186,057**	**$270,106**	**$162,721**	**$145,582**	**$1,458,261**
Insurance coverage (% of vessels / % of assets)	*28% / 50%*	*68% / 72%*	*36% / 42%*	*45% / 51%*	*77% / 32%*
Vessel Operation (2012)					
Owner-operator	48%	57%	81%	33%	23%
Actively shrimping	77%	87%	86%	94%	45%
Days at sea - Gulf shrimping	128	139	117	175	32
Shrimp landed (pounds)	60,135	97,149	63,724	92,111	32,262
Fuel use (gallons)	29,625	46,152	26,014	54,586	38,003
Fleet Averages					
Shrimp price ($ per pound)	3.47	3.24	2.78	3.77	3.76
Fuel price ($ per gallon)	3.38	3.27	3.23	3.21	3.52
Fuel efficiency I - Shrimp pounds per gallon	2.0	2.1	2.4	1.7	0.8
Fuel efficiency II - Shrimp revenue per gallon	7.05	6.83	6.82	6.36	3.19

(in USD unless otherwise noted)	SPGM Permit Fleet				
	FL	AL+MS	LA	TX	Other
# of Observations	60	69	118	173	22
Cash Flow (2012)					
Inflow - Total	**275,185**	**453,248**	**264,332**	**381,931**	**935,712**
Shrimp revenue	208,875	315,217	177,375	347,141	121,265
Non-shrimp revenue	7,696	5,268	2,319	4,276	801,762
Government payments received (shrimp related)	4,568	7,071	3,832	7,340	1,322
DWH-related payments received	54,046	125,693	80,805	23,174	11,364
Outflow - Total	**206,633**	**338,675**	**188,075**	**356,280**	**700,139**
Fuel	100,206	150,712	84,058	175,221	133,745
Other supplies	15,101	23,192	18,769	30,928	42,076
Crew & captain (hired)	47,662	74,229	41,280	76,121	349,425
Regular maintenance (vessel and gear)	18,329	19,149	11,875	24,981	45,153
Major repair and haul-out	7,135	11,051	4,643	9,787	26,488
Insurance	4,637	11,932	4,252	6,921	27,437
Overhead	7,621	16,239	12,296	14,105	30,651
Interest payments made (on vessel loans)	1,254	6,132	1,308	2,840	8,402
Principal payments made (on vessel loans)	3,097	21,276	5,856	10,717	33,791
New investments and upgrades (in vessel)	1,591	4,762	3,738	4,659	2,972
Net Cash Flow (excluding taxes)	**68,552**	**114,573**	**76,258**	**25,651**	**235,573**
Non-Cash Cost Estimates (2012)					
Owner's vessel time	11,088	12,643	15,944	5,715	7,161
Depreciation	9,350	12,634	7,872	7,998	17,059
Income Statement (2012)					
Revenue from Operations	**216,571**	**320,485**	**179,694**	**351,417**	**923,026**
Costs of Operations	**221,129**	**331,781**	**200,989**	**351,777**	**679,194**
Variable costs - Non-Labor (fuel, supplies)	*52.1%*	*52.4%*	*51.2%*	*58.6%*	*25.9%*
Variable costs - Labor (hired, owner)	*26.6%*	*26.2%*	*28.5%*	*23.3%*	*52.5%*
Fixed costs (maint., repair, insure, overh., depreci.)	*21.3%*	*21.4%*	*20.4%*	*18.1%*	*21.6%*
Net Revenue from Operations	**(4,558)**	**(11,296)**	**(21,295)**	**(360)**	**243,833**
Profit or Loss (before tax)	**52,802**	**115,335**	**62,035**	**27,314**	**248,116**
Fleet Returns (2012)					
Economic Return	(2.2%)	(3.6%)	(11.2%)	(0.2%)	15.0%
Return on Equity	28.4%	42.7%	38.1%	18.8%	17.0%

Table 5: F&E Results: Averages for the Gulf Shrimp Fleet by State and by Activity Status (2012)

	Gulf Shrimp Fleet				Gulf Shrimp Fleet	
	FL	AL+MS	LA	TX	Inactive	Active
# of Observations	54	68	118	173	47	370
Vessel Characteristics						
Length (feet)	61	71	63	72	48	71
Gross tons	89	117	80	120	51	111
Horse power	439	641	496	570	351	569
Year built	1984	1989	1989	1986	1985	1988
Hull material - Steel	33%	78%	81%	90%	38%	83%
Refrigeration - Freezer	59%	62%	27%	84%	17%	67%
State of Owner - Florida	100%	0%	0%	0%	26%	11%
State of Owner - Alabama or Mississippi	0%	100%	0%	0%	17%	16%
State of Owner - Louisiana	0%	0%	100%	0%	34%	28%
State of Owner - Texas	0%	0%	0%	100%	23%	44%
State of Owner - Other	0%	0%	0%	0%	0%	1%
Balance Sheet (end of 2012)						
Assets - Market value of vessel and permit	**$191,108**	**$318,867**	**$189,504**	**$208,986**	**$87,231**	**$237,889**
Original value of vessel (purchase price)	*$205,898*	*$384,795*	*$206,334*	*$279,633*	*$118,506*	*$285,685*
Implicit permit value	*$16,980*	*$30,553*	*$13,340*	*$26,849*	*$4,452*	*$24,676*
Liabilities - Loan on vessel	**$14,507**	**$45,009**	**$26,783**	**$63,404**	**$6,383**	**$49,780**
% of vessels with loan	*9%*	*40%*	*25%*	*41%*	*9%*	*35%*
Equity - Owner's equity in vessel	**$176,601**	**$273,858**	**$162,721**	**$145,582**	**$80,848**	**$188,109**
Insurance coverage (% of vessels / % of assets)	*28% / 53%*	*69% / 72%*	*36% / 42%*	*45% / 51%*	*9% / 6%*	*49% / 57%*
Vessel Operation (2012)						
Owner-operator	48%	56%	81%	33%	66%	51%
Actively shrimping	78%	88%	86%	94%	0%	100%
Days at sea - Gulf shrimping	141	141	117	175	0	169
Shrimp landed (pounds)	59,554	98,578	63,724	92,111	0	91,365
Fuel use (gallons)	30,076	46,804	26,014	54,586	0	47,367
Fleet Averages						
Shrimp price ($ per pound)	3.43	3.24	2.78	3.77	-	3.41
Fuel price ($ per gallon)	3.39	3.27	3.23	3.21	-	3.24
Fuel efficiency I - Shrimp pounds per gallon	2.0	2.1	2.4	1.7	-	1.9
Fuel efficiency II - Shrimp revenue per gallon	6.79	6.83	6.82	6.36	-	6.58

(in USD unless otherwise noted)	Gulf Shrimp Fleet				Gulf Shrimp Fleet	
	FL	AL+MS	LA	TX	Inactive	Active
# of Observations	54	68	118	173	47	370
Cash Flow (2012)						
Inflow - Total	**264,159**	**459,091**	**264,332**	**381,931**	**18,580**	**388,359**
Shrimp revenue	204,289	319,852	177,375	347,141	0	311,662
Non-shrimp revenue	80	4,523	2,319	4,276	4	3,591
Government payments received (shrimp related)	4,778	7,175	3,832	7,340	759	6,620
DWH-related payments received	55,013	127,541	80,805	23,174	17,817	66,487
Outflow - Total	**205,777**	**343,403**	**188,075**	**356,280**	**7,712**	**323,036**
Fuel	101,865	152,833	84,058	175,221	0	153,605
Other supplies	15,134	23,442	18,769	30,928	8	27,219
Crew & captain (hired)	44,682	75,293	41,280	76,121	0	70,118
Regular maintenance (vessel and gear)	18,154	19,423	11,875	24,981	1,038	21,900
Major repair and haul-out	7,227	11,213	4,643	9,787	2,465	8,940
Insurance	4,566	12,108	4,252	6,921	511	7,617
Overhead	7,968	16,447	12,296	14,105	2,305	14,473
Interest payments made (on vessel loans)	1,197	6,222	1,308	2,840	232	3,180
Principal payments made (on vessel loans)	3,216	21,589	5,856	10,717	386	11,543
New investments and upgrades (in vessel)	1,767	4,832	3,738	4,659	768	4,442
Net Cash Flow (excluding taxes)	**58,383**	**115,688**	**76,258**	**25,651**	**10,869**	**65,323**
Non-Cash Cost Estimates (2012)						
Owner's vessel time	9,962	12,719	15,944	5,715	213	11,620
Depreciation	8,185	12,819	7,872	7,998	2,688	9,624
Income Statement (2012)						
Revenue from Operations	**204,369**	**324,375**	**179,694**	**351,417**	**4**	**315,252**
Costs of Operations	**217,743**	**336,297**	**200,989**	**351,777**	**9,227**	**325,117**
Variable costs - Non-Labor (fuel, supplies)	*53.7%*	*52.4%*	*51.2%*	*58.6%*	*0.1%*	*55.6%*
Variable costs - Labor (hired, owner)	*25.1%*	*26.2%*	*28.5%*	*23.3%*	*2.3%*	*25.1%*
Fixed costs (maint., repair, insure, overh., depreci.)	*21.2%*	*21.4%*	*20.4%*	*18.1%*	*97.6%*	*19.2%*
Net Revenue from Operations	**(13,374)**	**(11,921)**	**(21,295)**	**(360)**	**(9,223)**	**(9,864)**
Profit or Loss (before tax)	**45,220**	**116,572**	**62,035**	**27,314**	**9,121**	**60,063**
Fleet Returns (2012)						
Economic Return	(7.0%)	(3.7%)	(11.2%)	(0.2%)	(10.6%)	(4.1%)
Return on Equity	25.6%	42.6%	38.1%	18.8%	11.3%	31.9%

Table 6: F&E Results: Averages for the Active Gulf Shrimp Fleet by State (2012)

	Active Gulf Shrimp	Active Gulf Shrimp Fleet			
		FL	AL+MS	LA	TX
# of Observations	370	42	60	102	162
Vessel Characteristics					
Length (feet)	71	65	75	66	74
Gross tons	111	100	127	85	124
Horse power	569	477	682	512	585
Year built	1988	1985	1988	1989	1987
Hull material - Steel	83%	40%	82%	86%	93%
Refrigeration - Freezer	67%	67%	70%	31%	88%
State of Owner - Florida	11%	100%	0%	0%	0%
State of Owner - Alabama or Mississippi	16%	0%	100%	0%	0%
State of Owner - Louisiana	28%	0%	0%	100%	0%
State of Owner - Texas	44%	0%	0%	0%	100%
State of Owner - Other	1%	0%	0%	0%	0%
Balance Sheet (end of 2012)					
Assets - Market value of vessel and permit	**$237,889**	**$229,285**	**$347,623**	**$202,265**	**$217,905**
Original value of vessel (purchase price)	*$285,685*	*$242,571*	*$409,718*	*$221,445*	*$290,618*
Implicit permit value	*$24,676*	*$20,282*	*$33,406*	*$14,959*	*$28,616*
Liabilities - Loan on vessel	**$49,780**	**$18,652**	**$51,010**	**$30,052**	**$66,444**
% of vessels with loan	*35%*	*12%*	*43%*	*27%*	*43%*
Equity - Owner's equity in vessel	**$188,109**	**$210,633**	**$296,613**	**$172,213**	**$151,461**
Insurance coverage (% of vessels / % of assets)	*49% / 57%*	*36% / 57%*	*77% / 75%*	*41% / 45%*	*47% / 52%*
Vessel Operation (2012)					
Owner-operator	51%	45%	58%	79%	31%
Actively shrimping	100%	100%	100%	100%	100%
Days at sea - Gulf shrimping	169	188	161	136	188
Shrimp landed (pounds)	91,365	76,569	111,722	73,720	98,365
Fuel use (gallons)	47,367	38,669	53,045	30,094	58,292
Fleet Averages					
Shrimp price ($ per pound)	3.41	3.43	3.24	2.78	3.77
Fuel price ($ per gallon)	3.24	3.39	3.27	3.23	3.21
Fuel efficiency I - Shrimp pounds per gallon	1.9	2.0	2.1	2.4	1.7
Fuel efficiency II - Shrimp revenue per gallon	6.58	6.79	6.83	6.82	6.36

(in USD unless otherwise noted)	Active Gulf Shrimp	Active Gulf Shrimp Fleet			
		FL	AL+MS	LA	TX
# of Observations	370	42	60	102	162
Cash Flow (2012)					
Inflow - Total	**388,359**	**331,285**	**519,920**	**300,898**	**407,865**
Shrimp revenue	311,662	262,657	362,499	205,199	370,713
Non-shrimp revenue	3,591	103	5,126	2,681	4,566
Government payments received (shrimp related)	6,620	6,122	8,123	4,097	7,838
DWH-related payments received	66,487	62,403	144,172	88,921	24,748
Outflow - Total	**323,036**	**261,738**	**388,231**	**216,200**	**380,191**
Fuel	153,605	130,969	173,211	97,244	187,119
Other supplies	27,219	19,458	26,567	21,709	33,028
Crew & captain (hired)	70,118	57,449	85,332	47,756	81,290
Regular maintenance (vessel and gear)	21,900	23,149	21,996	13,402	26,643
Major repair and haul-out	8,940	7,804	12,625	4,897	10,451
Insurance	7,617	5,871	13,639	4,840	7,324
Overhead	14,473	9,092	18,115	14,095	14,969
Interest payments made (on vessel loans)	3,180	1,539	7,038	1,426	3,025
Principal payments made (on vessel loans)	11,543	4,135	24,315	6,687	11,444
New investments and upgrades (in vessel)	4,442	2,272	5,393	4,145	4,897
Net Cash Flow (excluding taxes)	**65,323**	**69,547**	**131,689**	**84,698**	**27,674**
Non-Cash Cost Estimates (2012)					
Owner's vessel time	11,620	12,808	14,414	18,347	6,103
Depreciation	9,624	9,700	14,301	8,575	8,393
Income Statement (2012)					
Revenue from Operations	**315,252**	**262,760**	**367,626**	**207,880**	**375,279**
Costs of Operations	**325,117**	**276,299**	**380,200**	**230,866**	**375,320**
Variable costs - Non-Labor (fuel, supplies)	*55.6%*	*54.4%*	*52.5%*	*51.5%*	*58.7%*
Variable costs - Labor (hired, owner)	*25.1%*	*25.4%*	*26.2%*	*28.6%*	*23.3%*
Fixed costs (maint., repair, insure, overh., depreci.)	*19.2%*	*20.1%*	*21.2%*	*19.8%*	*18.1%*
Net Revenue from Operations	**(9,864)**	**(13,539)**	**(12,575)**	**(22,986)**	**(41)**
Profit or Loss (before tax)	**60,063**	**53,446**	**132,681**	**68,606**	**29,519**
Fleet Returns (2012)					
Economic Return	(4.1%)	(5.9%)	(3.6%)	(11.4%)	(0.0%)
Return on Equity	31.9%	25.4%	44.7%	39.8%	19.5%

Table 7: F&E Results: Averages for the Active Gulf Shrimp Fleet by Ownership Structure; and of the Owner-Operated Sub-Fleet by Captain's Share Structure (2012)

	Active Gulf Shrimp	Active Gulf Shrimp Fleet		Own-Operator Act. Gulf Shr.	
		Hired Captain	Own-Operator	without Share	with Share
# of Observations	370	183	187	119	68
Vessel Characteristics					
Length (feet)	71	72	69	67	73
Gross tons	111	121	102	95	115
Horse power	569	582	557	538	591
Year built	1988	1988	1987	1987	1988
Hull material - Steel	83%	86%	81%	78%	85%
Refrigeration - Freezer	67%	83%	51%	46%	60%
State of Owner - Florida	11%	13%	10%	8%	15%
State of Owner - Alabama or Mississippi	16%	14%	19%	19%	18%
State of Owner - Louisiana	28%	11%	43%	44%	43%
State of Owner - Texas	44%	61%	27%	29%	25%
State of Owner - Other	1%	2%	1%	1%	0%
Balance Sheet (end of 2012)					
Assets - Market value of vessel and permit	**$237,889**	**$259,361**	**$216,877**	**$204,484**	**$238,563**
Original value of vessel (purchase price)	*$285,685*	*$300,400*	*$271,285*	*$257,389*	*$295,603*
Implicit permit value	*$24,676*	*$23,214*	*$26,156*	*$22,298*	*$32,191*
Liabilities - Loan on vessel	**$49,780**	**$60,381**	**$39,406**	**$42,010**	**$34,850**
% of vessels with loan	*35%*	*39%*	*32%*	*32%*	*32%*
Equity - Owner's equity in vessel	**$188,109**	**$198,981**	**$177,470**	**$162,474**	**$203,713**
Insurance coverage (% of vessels / % of assets)	*49% / 57%*	*54% / 57%*	*44% / 57%*	*37% / 54%*	*57% / 63%*
Vessel Operation (2012)					
Owner-operator	51%	0%	100%	100%	100%
Actively shrimping	100%	100%	100%	100%	100%
Days at sea - Gulf shrimping	169	194	144	134	162
Shrimp landed (pounds)	91,365	104,023	78,978	72,418	90,456
Fuel use (gallons)	47,367	57,109	37,834	34,867	43,027
Fleet Averages					
Shrimp price ($ per pound)	3.41	3.63	3.13	3.09	3.18
Fuel price ($ per gallon)	3.24	3.23	3.26	3.27	3.24
Fuel efficiency I - Shrimp pounds per gallon	1.9	1.8	2.1	2.1	2.1
Fuel efficiency II - Shrimp revenue per gallon	6.58	6.61	6.53	6.42	6.69

(in USD unless otherwise noted)	Active Gulf Shrimp	Active Gulf Shrimp Fleet		Own-Operator Act. Gulf Shr.	
		Hired Captain	Own-Operator	without Share	with Share
# of Observations	370	183	187	119	68
Cash Flow (2012)					
Inflow - Total	**388,359**	**437,744**	**340,031**	**324,240**	**367,665**
Shrimp revenue	311,662	377,533	247,199	224,019	287,765
Non-shrimp revenue	3,591	4,699	2,506	678	5,706
Government payments received (shrimp related)	6,620	7,666	5,596	6,418	4,156
DWH-related payments received	66,487	47,846	84,729	93,124	70,037
Outflow - Total	**323,036**	**397,693**	**249,976**	**231,499**	**282,312**
Fuel	153,605	184,666	123,209	113,995	139,333
Other supplies	27,219	33,326	21,244	18,042	26,847
Crew & captain (hired)	70,118	93,893	46,851	41,956	55,418
Regular maintenance (vessel and gear)	21,900	29,440	14,521	14,011	15,414
Major repair and haul-out	8,940	11,138	6,789	6,115	7,969
Insurance	7,617	8,740	6,518	5,326	8,602
Overhead	14,473	15,997	12,981	11,814	15,024
Interest payments made (on vessel loans)	3,180	3,680	2,691	3,256	1,702
Principal payments made (on vessel loans)	11,543	11,622	11,466	13,482	7,938
New investments and upgrades (in vessel)	4,442	5,193	3,707	3,502	4,064
Net Cash Flow (excluding taxes)	**65,323**	**40,051**	**90,054**	**92,741**	**85,353**
Non-Cash Cost Estimates (2012)					
Owner's vessel time	11,620	0	22,992	20,098	28,056
Depreciation	9,624	10,103	9,156	8,213	10,805
Income Statement (2012)					
Revenue from Operations	**315,252**	**382,232**	**249,706**	**224,697**	**293,471**
Costs of Operations	**325,117**	**387,302**	**264,261**	**239,570**	**307,470**
Variable costs - Non-Labor (fuel, supplies)	*55.6%*	*56.3%*	*54.7%*	*55.1%*	*54.0%*
Variable costs - Labor (hired, owner)	*25.1%*	*24.2%*	*26.4%*	*25.9%*	*27.1%*
Fixed costs (maint., repair, insure, overh., depreci.)	*19.2%*	*19.5%*	*18.9%*	*19.0%*	*18.8%*
Net Revenue from Operations	**(9,864)**	**(5,070)**	**(14,555)**	**(14,873)**	**(13,999)**
Profit or Loss (before tax)	**60,063**	**46,762**	**73,079**	**81,414**	**58,493**
Fleet Returns (2012)					
Economic Return	(4.1%)	(2.0%)	(6.7%)	(7.3%)	(5.9%)
Return on Equity	31.9%	23.5%	41.2%	50.1%	28.7%

Table 8: F&E Results: Averages for the Active Gulf Shrimp Fleet Grouped by Those Receiving DWH-Related Payments and Those Who Are Not (2012)

	Active Gulf Shrimp	No Oil Money	BP Oil Money
# of Observations	370	217	153
Vessel Characteristics			
Length (feet)	71	70	71
Gross tons	111	111	112
Horse power	569	564	577
Year built	1988	1988	1987
Hull material - Steel	83%	83%	84%
Refrigeration - Freezer	67%	71%	61%
State of Owner - Florida	11%	10%	13%
State of Owner - Alabama or Mississippi	16%	12%	22%
State of Owner - Louisiana	28%	21%	37%
State of Owner - Texas	44%	56%	27%
State of Owner - Other	1%	1%	1%
Balance Sheet (end of 2012)			
Assets - Market value of vessel and permit	**$237,889**	**$237,172**	**$238,906**
Original value of vessel (purchase price)	*$285,685*	*$268,718*	*$309,751*
Implicit permit value	*$24,676*	*$26,019*	*$22,738*
Liabilities - Loan on vessel	**$49,780**	**$54,139**	**$43,598**
% of vessels with loan	*35%*	*38%*	*31%*
Equity - Owner's equity in vessel	**$188,109**	**$183,033**	**$195,308**
Insurance coverage (% of vessels / % of assets)	*49% / 57%*	*45% / 53%*	*56% / 62%*
Vessel Operation (2012)			
Owner-operator	51%	42%	63%
Actively shrimping	100%	100%	100%
Days at sea - Gulf shrimping	169	172	165
Shrimp landed (pounds)	91,365	90,158	93,077
Fuel use (gallons)	47,367	47,853	46,678
Fleet Averages			
Shrimp price ($ per pound)	3.41	3.51	3.27
Fuel price ($ per gallon)	3.24	3.22	3.27
Fuel efficiency I - Shrimp pounds per gallon	1.9	1.9	2.0
Fuel efficiency II - Shrimp revenue per gallon	6.58	6.61	6.53

(in USD unless otherwise noted)	Active Gulf Shrimp	No Oil Money	BP Oil Money
# of Observations	370	217	153
Cash Flow (2012)			
Inflow - Total	**388,359**	**327,302**	**474,956**
Shrimp revenue	311,662	316,549	304,730
Non-shrimp revenue	3,591	4,453	2,368
Government payments received (shrimp related)	6,620	6,300	7,072
DWH-related payments received	66,487	0	160,786
Outflow - Total	**323,036**	**316,907**	**331,729**
Fuel	153,605	154,267	152,667
Other supplies	27,219	25,949	29,022
Crew & captain (hired)	70,118	69,682	70,736
Regular maintenance (vessel and gear)	21,900	22,956	20,402
Major repair and haul-out	8,940	8,719	9,253
Insurance	7,617	7,265	8,116
Overhead	14,473	11,987	17,998
Interest payments made (on vessel loans)	3,180	3,067	3,340
Principal payments made (on vessel loans)	11,543	9,609	14,286
New investments and upgrades (in vessel)	4,442	3,407	5,910
Net Cash Flow (excluding taxes)	**65,323**	**10,395**	**143,227**
Non-Cash Cost Estimates (2012)			
Owner's vessel time	11,620	8,724	15,728
Depreciation	9,624	9,010	10,495
Income Statement (2012)			
Revenue from Operations	**315,252**	**321,002**	**307,098**
Costs of Operations	**325,117**	**318,559**	**334,417**
Variable costs - Non-Labor (fuel, supplies)	*55.6%*	*56.6%*	*54.3%*
Variable costs - Labor (hired, owner)	*25.1%*	*24.6%*	*25.9%*
Fixed costs (maint., repair, insure, overh., depreci.)	*19.2%*	*18.8%*	*19.8%*
Net Revenue from Operations	**(9,864)**	**2,443**	**(27,319)**
Profit or Loss (before tax)	**60,063**	**5,676**	**137,199**
Fleet Returns (2012)			
Economic Return	(4.1%)	1.0%	(11.4%)
Return on Equity	31.9%	3.1%	70.2%

Definitions

Balance Sheet: A balance sheet is a snapshot of a company's financial condition. A company's balance sheet has three parts: assets, liabilities, and the owner's equity. The asset side of a balance sheet lists all assets of a company and their value at a given point in time. The liability side lists the various sources of money invested to acquire these assets (the financial capital). Beyond investing their own capital (money), most company owners borrow financial capital from other sources, such as banks. The equity, the owners' interest on the assets of the company, always equals the difference between the value of all assets and what is owed.

Cash Flow Statement: The cash flow statement shows a company's flow of money. Money accruing to the company is called cash inflow. In this study, the most important cash inflow is revenue generated through the sale of commercially harvested seafood. Money leaving the company is called cash outflow, which includes the various costs of owning and operating the shrimp vessel. Transactions that do not directly create cash receipts and payments are excluded. The difference between inflow and outflow---the net cash flow---reflects the vessel owner's liquidity or solvency and is useful in determining the short-term viability of a company.

Income Statement: An income statement is intended to help owners and investors determine the true economic performance of a company over a specified period of time. The income statement is sometimes called the profit and loss statement. The income statement begins with the revenue generated from operations (sale of product or service) and subtracts all operating costs, including estimates of non-cash costs such as the value of owner's labor and depreciation. The result is the net revenue from operations. This is a measure of the true economic return to a productive activity. More relevant to the owners of a company is their actual profit or loss, which is calculated by subtracting financing costs (such as interest payments) and adding non-operating income to net revenue from operations. In contrast to the cash flow statement, loan principal and new investment expenses are not included, as they represent a shift among asset classes (e.g., cash to vessel) rather than an economic cost.

Returns: An "economic return" (of commercial fishing) is calculated by dividing net operating revenue by the value of vessel assets. Economic return quantifies the productivity of a shrimp vessel's production from a societal perspective. In contrast, the return on equity is the primary concern of the individual owner. The return on equity is calculated by dividing the profit or loss by the equity currently invested by the owner in the vessel.

Data Sources

Permit and vessel data:	Constituency Services Branch, Southeast Regional Office, NMFS.
Revenue and landings data:	Trip ticket programs of the various Gulf and Atlantic States as consolidated by the NMFS, SE Fisheries Science Center, Galveston lab (Gulf shrimp system); the Atlantic Coastal Cooperative Statistics Program; and the Gulf Fisheries Information Network at the Gulf States Marine Fisheries Commission.
Economic data:	NMFS, SE Fisheries Science Center, Miami lab, Social Science Research Group.

More Information

For more definitions, as well as background on the survey design, processing and cleaning of the data, and the quality, caveats, and idiosyncrasies associated with each data field, please see the NOAA Technical memorandum (NMFS-SEFSC-601) available at: www.sefsc.noaa.gov/socialscience/shrimp.htm

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