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p. 2

This report explains the purpose and use of Marine Economics Data Sheets. The explanation begins at the right and continues on page 4. Pages 2 and 3 illustrate both sides of a Marine Economics Data Sheet and describe its parts.

Understanding and Using Marine Economics Data Sheets

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Capt Mark is a Charleston shrimp boat, similar to the one described in Marine Economics Data Sheet SR 500-20, shown and explained on pages 2 and 3.

What are Marine Economics Data Sheets?

Marine Economics Data Sheets (MEDS) are single-sheet summaries of costs and returns for different types of marine businesses—commercial fishing, charter fishing, marinas, and boatyards. MEDS have been a service of Oregon State University's Extension Marine Advisory Program since April 1969. All MEDS have a similar format and general plan, even though the costs and returns vary considerably.

MEDS have these purposes:

- to illustrate a profit-analysis procedure that you can use in your own business;
- to provide costs and returns data for comparison with your own costs and returns; and
- to indicate the potential profitability of different marine businesses.

Is the information accurate?

The National Marine Fisheries Service and various universities have conducted studies of "sample" marine businesses. Some MEDS use the results of these studies. Most MEDS are based on studies conducted by the Marine Advisory Program staff, especially for the purpose of developing MEDS.

From three to six local marine business managers are selected on the basis of their knowledge, success, and similarity among their businesses. A MAP staff person then interviews the group, obtaining a consensus on each of the items the planned MEDS will illustrate. These and other marine business managers then review drafts of the MEDS to verify accuracy.

Data developed in this manner represent only the business involved. However, since the marine business managers participating in the studies are usually more successful than the average, MEDS usually represent an above-average marine business in all aspects.

For each MEDS, the data source is indicated in a footnote.



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1. Boat, equipment, and fishery

Each MEDS gives first the physical description and market value of business equipment and property. Depending on the nature of the marine business, volume of sales, and production, this item also provides effort expended and expected prices.

2. Gross returns

This is the total value of all goods and services sold, before any deductions.

3. Variable costs

These include all costs that vary as the volume of the business varies. The value of unpaid family labor (excluding the operator) is included, as is the net cost of labor (crew). Some costs, such as equipment and repair, may not vary exactly with the volume of business but are included under the "Variable costs" category for simplicity.

4. Fixed costs

These are all costs that remain constant, regardless of the volume of business. Interest on any debt is not included in this category as it is considered under item 7, "Opportunity costs: Total investment."

5. Opportunity costs:

Operator labor and management

This is the estimated value of the operator's time, or the amount the operator could have earned managing and working in another, similar business. The manager gives up this salary because it is the manager's own business. Therefore, it is an opportunity cost.

6. Opportunity costs:

Total business investment

This is the estimated fair return (interest) to the total investment, regardless of actual debt.

Oregon State University
Extension Service

SR 500-20

Marine Economics Data Sheet

Charleston Shrimp and Crab Fishing Business

Boat

52 feet by 15 feet, wood hull, \$125,000 market value, 220 hp diesel engine.

Equipment

Hydraulic crab block, two net reels, 250 crab pots, five shrimp nets, auxiliary engine, automatic pilot, loran, radar, VHF, CB, single sideband radio, fathometer and recording fathometer.

Fishery^{a/}

70 days fishing dungeness crab, production of 50 tons (100,000 pounds) at an average price of \$1,100 per ton (\$.55 per pound).

110 days fishing shrimp, production of 250 tons (500,000 pounds) at an average price of \$460 per ton (\$.23 per pound).

Gross Returns

Dungeness crab.....	\$ 55,000
Shrimp.....	115,000
(1) Total gross returns.....	\$170,000

Variable Costs^{b/}

Boat and engine repair.....	\$ 1,200
Gear repair.....	3,060
Fuel.....	4,200
Food.....	1,225
Ice.....	3,300
Bait.....	2,750
Crewshare ^{c/}	51,000
(2) Total variable costs.....	\$ 66,735

Fixed Costs^{d/}

Insurance.....	\$ 3,800
Depreciation.....	4,000
Interest on operating capital ^{e/}	1,067
Moorage.....	285
Licenses.....	210
Dues and fees.....	2,325
Miscellaneous.....	620
(3) Total fixed costs.....	\$ 12,307

A Sea Grant Marine Advisory Project

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Marine
Economic
Data Sheet
SR 500-20

Front

7. Return to operator's labor, management, and total investment

This is what the owner/operator earned for the time, skill, risk, decisionmaking, and money invested in the business. All costs have been covered except costs of the operator's labor, management, and total investment.

8. Return to operator's labor and management

This is what the operator earned for the time, skill, risk, and decisionmaking he invested in the business. All costs (including opportunity costs of total business investment) except the operator's labor and management have been covered.

9. Return to total investment

This is what the total investment earned in the business. All costs

except the opportunity cost of investment have been covered. This can be compared with item 6 above, "Opportunity costs: Total business investment," in measuring the financial success of this business.

10. Net cash available for personal outlays and debt service

Depreciation and interest are added back to "Return to operator's labor, management, and total investment," as calculated above (item 7). This is not a measure of profitability but a measure of this business' ability to meet cash needs.

11. Footnotes

These explain the technicalities of some of the costs, and they provide other necessary supporting information.

<u>Opportunity Costs^{f/}</u>	(4) Operator's labor and management (30% of gross).....\$ 34,000
	(5) Total business investment (10% of \$125,000).....\$ 12,500
<u>Analysis</u>	Return to operator's labor, management and total investment (1 less 2 and 3)....\$ 90,958
	Return to operator's labor and manage- ment (1 less 2, 3 and 5).....\$ 78,458 ((\$436/fishing day)
	Return to total investment (1 less 2, 3 and 4).....\$ 39,958 (32%)
	Net cash available for personal outlays and debt service (return to labor, manage- ment and investment, plus depreciation and interest on operating capital).....\$ 96,025

Developed by the Oregon State University Marine Advisory Program in cooperation with selected Charleston fishermen, November 1977. These data represent only the boat, equipment and fishery described.

- ^{a/} These data represent only the 1977 crab and shrimp season. Fishing days, production and prices vary from season to season and directly affect the financial success of the fishing business.
- ^{b/} Costs that generally vary with fishing effort.
- ^{c/} Two crew members each receive 15% of gross returns for fishing, gear repairs, vessel repairs and other services.
- ^{d/} Costs that generally do not vary with fishing effort.
- ^{e/} Interest on operating capital is the average interest paid on cash costs incurred during that portion of the year during which no fishing took place.
- ^{f/} Opportunity costs represent a fair value of the operator's labor, management and investment. The opportunity cost of labor and management is the percentage of gross returns this operator could have earned as a hired skipper and manager. The opportunity cost of investment is the interest that could be earned if the business had been sold to someone else.

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**Charleston
Shrimp and
Crab Fishing
Business**

Back



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How do you use your MEDS?

Study the breakdown of the sample MEDS provided on pages 2 and 3 of this report. Note the organization of costs and returns. *Note, too, that this arrangement is not appropriate for tax reporting or crew settlement.*

Once familiar with the way MEDS work, you will find it useful to develop similar information and analysis of your own marine business. This new information and the MEDS can be used in the following way:

1. Compare your costs with those shown on the MEDS. Are some of yours too high?
2. Take your costs and returns data, and the MEDS, to your lender. Can you get better credit terms?
3. Use your costs and the MEDS to determine "break-even" prices.
4. Use MEDS to project profit or loss for a new boat, new fishery, etc.

MAP is here to help you

Your Extension marine agent can provide further assistance, and he will usually have other publications that will be useful to you.

There are four Extension marine advisory offices on the Oregon coast (listed here from north to south):

- Astoria 97103
Clatsop County Extension Office
Post Office (P.O. Box 207)
phone: (503) 325-7441, ext. 50
- Tillamook 97141
Tillamook County Extension Office
Courthouse
phone: (503) 842-5511, ext. 372
- Newport 97365
Lincoln County Extension Office
Courthouse (225 W. Olive)
phone: (503) 265-5376
- Coquille 97423
Coos County Extension Office
290 N. Central
phone: (503) 396-3121, ext. 242