

# The viability of the German fishing fleet

*H.F. Campbell, C-H. Hanf and C.M. Brodersen*<sup>1</sup>[1]

## Abstract

The paper analyses the annual accounts for the period 1990-94 of a sample of approximately 100 fishing firms operating out of ports in Schleswig-Holstein and exploiting finfish stocks in the North Sea and Baltic, and shrimp stocks in the North Sea. Detailed information is provided on costs and returns by size class of vessel and principal species harvested. The economic and financial viability of the firms is assessed and the value to their owners calculated. Estimates are provided of the size of the decommissioning grant required to induce the vessels to leave the industry, taking account of the tax and subsidy position of the firm. The implications of the results for Germany's vessel decommissioning programme are discussed.

## 1. Introduction

The EC allocates Germany catch quotas for important fish species such as cod, herring, and spratt. The quotas are Germany's shares of the EC total allocation, which are determined by biological analysis of the available fish stocks conducted by ICES (International Council for the Exploration of the Sea).

In common with other countries, German's fishing fleet is in excess of the number of vessels required to catch its quota. For example, Frost (1994) estimates that around only 25% of the current catching capacity is required to take the average German catches of cod, herring and spratt in recent years in the Baltic. Frost's estimate is based on the catching power of an average Danish trawler and his results are approximate only. Furthermore his analysis does not take account of the significant fluctuations in animal catch: for example, the total Baltic cod catch has fallen from 441,447 tonnes in 1984 to 40,429 tonnes in 1993. Nevertheless Frost's results suggest that a substantial reduction of the German fleet may be required.

Under the European Union's Common Fisheries Policy, member states are required to submit Multi Annual Guidance Programmes for their fishing fleets, specifying the long-term adjustments which are necessary to reduce fishing capacity to a level consistent with available resources. The nature and extent of the appropriate rationalization programme depends upon:

(1) the appropriate size of the fleet: this depends on the prices of fish, the costs and catching power of the vessels and the sizes of the catch quotas. This information can be used to form a set of constraints within which the policy maker must operate. Economic analysis can be used to work out the fleet size and composition, which will best meet objectives such as financial viability, economic efficiency, provision of employment, and stability of local economies. The analysis needs to take account of the likely future variability of the total allowable catch, and of possible changes in fish prices and harvesting costs.

(2) the economic and financial viability of the existing fleet. The European Union has adopted a Decommissioning Scheme, which pays a grant to vessel owners who withdraw their vessel from the fishery. For example, the grant is 62,500 ECU for a 30

---

<sup>1</sup>

GRT vessel, and 125,000 ECU for a 50 GRT vessel (Frost et al. (1995)). Whether or not grants of this kind will be successful in encouraging vessels to leave the fishery depends on the current economic and financial performance of the vessels in the fleet.

This paper is concerned with the second of the above questions, it analyses data on costs and returns for a sample of vessels registered in Schleswig-Holstein to determine economic and financial performance. The likely response of vessel owners to various levels of the decommissioning grant is also estimated.

## **2. Description of the Fishery**

The German fleet consists of around 2,400 vessels, of which 94% are less than 50 GRT. Table 1 reports the size distribution of the vessels and their main areas of operation. The majority of vessels (81%) operate in the Baltic where they catch various species of sea fish. Most of the remainder fish for shrimp and sea fish in the North Sea. A small number of vessels catch freshwater species and there is a small number of distant water vessels.

The species quotas allocated to Germany by the European Union are allocated to the States, which in turn allocate them to producers' associations. At present the catch of most species is regulated on a total allowable catch (TAC) basis: individual vessels are allowed to catch as much as they please until the overall catch quota is reached. Some exceptions are the sole and plaice fisheries where the allowable catch is allocated to individual vessels in the form of weekly quotas in the North Sea and monthly quotas in the Baltic. There are also individual tradable vessel quotas for salmon. Normally, however, the quotas are not transferable but revert to the producers' association if the fisherman sells or decommissions his vessel. The more general introduction of transferable vessel quotas is currently under consideration.

## **3. The Sample**

Balance sheets, profit and loss statements, and vessel characteristics and operational details were obtained for a sample of vessels registered in Schleswig-Holstein<sup>2</sup> for the period 1990-94. This information is compiled and submitted to the Ministry of Food, Agriculture, Forestry and Fisheries by the accountant of each fishing firm in the sample. The data are for the firm rather than for the vessel, but the principal activity of each firm is fishing. For example, fish sales constituted 95% of the revenue of the firms contained in the 1994 sample, and no firm in that sample owned more than one vessel. The same firms are sampled each year, except that fishermen who retire are replaced in the sample but not necessarily by a fisherman with the same category of vessel. In consequence approximately 90% of the firms included in the sample in any given year are included in the following year.

The information available about each vessel owned by the sample firms includes: length and tonnage, year built, whether the vessel is decked or undecked, fishing area (North Sea or Baltic), number of days fished in the year, percentage division of the catch value between seafish, shrimp and freshwater fish, the percentage of the firm's revenue (excluding subsidies) obtained from sales of fish, the number of crew including the skipper/owner, and the number of man days worked at fishing in the year.

---

Table 2 reports a summary description of the fleet of vessels owned by the 102 firms sampled in 1994. The size distribution of vessels by length is reported, together with the type of fishery which is the main source of revenue, area of operation, year the vessel was built, average number of days fished, and average crew numbers. As expected, larger vessels tend to have more crew and to fish more days in the year. There is little difference in average age of vessel across size classes, with the average age of vessels in the sample being almost 30 years. Table 3 reports the size distribution of the 1994 sample of vessels by tonnage, principal species, as defined by main source of revenue, and area of operation. Of the 102 vessels in the 1994 sample, 44 have North Sea shrimp as their principal species, 45 have Baltic seafish and 13 have North Sea seafish. In most cases a significant proportion of revenue is derived from non-principal species as well.

#### **4. Analysis of Economic Viability Of Fishing Operations**

Firms in the sample may earn income or incur costs through activities other than fishing. For example, some firms receive interest on bank deposits, or rent from buildings; some receive wages or income from other activities. In our analysis of economic viability we have removed, as far as possible, receipts and payments associated with non-fishing activity. Annual costs are categorized as variable, fixed or capital costs. Variable costs consist of trade and services, loading charges, fuel, travel costs (costs incurred by the operators in travelling between the port and their homes), navigation fees, materials, charter fees and hire charges. Fixed costs consist of association fees (fees paid to fishing cooperatives), insurance, wages and salaries paid to crew (including social security payments), and the value of the operator's labour. The latter value is set at 60,000 DMs which is 1.2 times the approximate salary (including social security payments) of an experienced crew member [3]. This sum is intended to reflect the long-term earning power elsewhere in the economy of a person who has the ability to become a fishing boat owner/operator. Capital costs consist of maintenance, depreciation and interest. Maintenance consists of out-of-pocket expenses, whereas depreciation estimates are based on accounting conventions. The interest cost of capital was calculated as the value of invested capital multiplied by an imputed rate of interest. The value of invested capital is the reported value of the vessel, motors, gear, cooling and other equipment, fixed machinery and sheds owned by the firm. The imputed interest rate was calculated as the weighted sample average rate of interest payable on debt, using each firm's share of the total amount of debt of the sampled firms as weights, plus a 4% risk premium. The weight average rate of interest payable on debt for the sampled firms over the period 1990-94 was 6.69%, and a rate of 10.69% was used to calculate the imputed interest and risk cost of capital.

The results for the 1994 sample of 102 vessels are reported in Table 4.4. In addition to average values of revenues and costs for each category of vessel, the table reports average values of economic profit or loss for the year, the present value of profit calculated at the imputed interest rate, the one-year rate of return calculated as the ratio of economic profit plus imputed interest cost of capital to the value of invested capital, and estimates of costs and revenues per day fished. It can be seen that, apart from large North Sea seafish vessels, the various categories of vessels are similar in their levels of costs and revenues per day fished. The large North Sea seafish vessels are much bigger operations than the rest, with daily revenues and costs around 3 to 6 times those of the others. It can be seen that only one of the nine categories of vessel reported average revenues in excess or opportunity costs in 1994: mid-size Baltic seafish vessels. The remaining vessels experience significant economic losses.

---

However vessels in all categories are earning daily revenues substantially in excess of their variable costs, and at least equal to their variable plus fixed costs. The economic losses reported in Table 4.4 result either from vessels failing to earn enough to cover the estimated long-run opportunity cost of capital, or to cover the estimated opportunity COST of the owner's labour, in addition to their other costs.

The profitability estimates for 1994 can be compared with those for earlier years in the sample period 1990-94. Tables 4.0-4.3 report the results for the earlier years. Because of changes in sample composition the numbers of vessels in the mid-sized North Sea seafood category fell below 3 in the period 1990-93. For reasons of confidentiality results cannot be reported for that category and period. Inspection of Tables 4.0-4.4 suggests that 1990-92 were generally better years for the fishery than 1993-94: a crude measure of performance is the average of the average revenues per days fished for each category of vessel; by this measure performance in 1993-94 ranged from 62 - 108% of that in the 1990-92 period. The categories of vessels which performed marginally better in the 1993-94 period were large North Sea vessels.

## **5. Analysis of Financial Viability of Fishing Firms**

The response of a fishing firm to an offer of a decommissioning grant depends on the firm's financial viability rather than its economic viability. Financial viability takes account of the tax and subsidy position of the firm, as well as the revenues and costs associated with its income generating activity. While it might be reasonable to assume that all subsidies received by the firm are associated with its fishing activities, it is not possible to allocate the firm's tax bill between fishing and non-fishing activities. For this reason the financial viability of the firm as a whole is considered. Since fishing is the predominant activity of all firms in the sample, the inclusion of non-fishing activities, where they occur, should not significantly affect the results of the analysis.

Table 5.4 reports estimates of the average financial viability of various categories of firms in the 1994 sample, as summarized by the present value of revenues less COSTS. These estimates are obtained from calculations similar to those used to generate the present values reported in Table 4 summarizing economic viability. However the calculations differ in several respects. Annual revenues are adjusted to include subsidies and income from other sources, including wages, rent and interest. Taxes paid are included as a cost and the value of the owner's labour is costed at a lower rate. Taxes include company taxes (Körperschaftsteuer) and licensing fees (Gewerbesteuer), but not personal income taxes: subsidies include decommissioning payments, interest and investment subsidies, and subsidies for capacity adjustments other than decommissioning. The actual amount of interest paid is included as a cost, but no interest is imputed on the value of the owner's equity. The discount rate used to compute the present value of the firm is the same interest rate used in the economic viability calculations.

In the calculation of economic viability the opportunity cost of the owner's labour was costed at a 20% premium over the wage of an experienced crew member to reflect the earnings which the owner/operator could expect in an alternative career. However an owner/operator leaving the fishery would receive no return elsewhere in the economy for fishing industry specific skills, and might not have the opportunity to develop equivalent skills in an alternative occupation. For this reason the opportunity cost of the owner's labour is estimated to be 50,000 DMs which is approximately equivalent to the wage, including social security payments, normally earned by an experienced crew member.

A potential entrant to the fishery considering whether to buy a boat plus quota would be interested in both the financial and economic viability of the firm. He would wish to take account of financial aspects, such as subsidies received and taxes paid, and economic aspects such as the opportunity cost of his labour. In calculating his opportunity cost, it would be reasonable for him to attach a 20% premium to the remuneration of an experienced crewmember because of the additional skills required to operate a business. For this reason the present value of the flow of revenues less opportunity costs generated by the firm for a new entrant would be less than that for an existing operator.

The values reported in Table 5.4 indicate that all classes of vessel, with the exception of large sized North Sea seafish vessels, are financially viable on the basis of their 1994 performance if the imputed value of the owner's labour is not included as a cost. When this value is included as a cost then only medium and large Baltic seafish and medium North Sea shrimp vessels are viable. Of the remaining vessels, North Sea seafish vessels seem to be the least profitable. A comparison of the estimates in Table 5.4 with those for earlier years supports the view that the financial condition of the fisheries has been deteriorating over the period 1990-94. Tables 5.0-5.4 reveal that, including the imputed value of owner's labour as a cost, the numbers of categories of sampled vessels which failed on average to cover costs were: 1 in 1990, 1 in 1991, 2 in 1992, 3 in 1993 and 6 in 1994. Excluding the imputed value of owner's labour as a cost, the only category in which the average sampled vessel failed to cover costs was large North Sea seafish vessels in 1990, 1991, 1993 and 1994.

## **6. Analysis Of The Effects Of The Decommissioning Grant**

Accepting a decommissioning grant involves forgoing the revenue and cost flows generated by the firm for the remaining life of the fishing vessel, or, alternatively, forgoing the opportunity to sell the boat with its quota to another operator. The size of the minimum required decommissioning grant can be calculated as the capital sum, after tax, which is equivalent to the present value of the stream of after tax net revenues expected from the operations of the firm in the future. The latter value exceeds the net proceeds to the owner of selling the firm to another operator for two reasons: first, as noted in Section 5, a new entrant would have a higher opportunity cost of labour and would place a lower present value on the net revenues generated by the firm; and, secondly, the seller would be liable to pay a portion of the net present value of the firm as capital gains tax. Hence the size of the minimum decommissioning grant required can be calculated by comparing the grant, net of capital gains tax, with the present value of the revenue and cost flows, including the estimate of the opportunity cost of the owner's labour and the effects of taxes and subsidies, to the owner/operator.

When the grant is received the vessel, without its quota, is assumed to be sold or otherwise disposed of and the long-term debt paid off. When the vessel is decommissioned its disposal value is deemed, for tax purposes, to be the decommissioning grant plus the sale value of the vessel without quota. Capital gains tax is payable on the disposal value net of book value. It will be assumed that the sale value of the vessel without quota is the book value, so that capital gains tax is payable only on the value of the decommissioning grant. In calculating the revenue and cost flows, it will be assumed that the fishing vessel can be operated for a considerable time into the future. Revenues include sales receipts, charter fees and subsidies. Costs include variable and fixed costs, including the imputed value of the owner's labour, taxes, interest payments (but not imputed costs of capital), maintenance and depreciation: despite the assumption that the vessel can be operated for a long period

in the future, depreciation is included in the measure of cost since it is a cost associated with replacing the vessel at some stage.

The following condition determines the minimum grant necessary to induce the owner/operator to wind up the firm under the above assumptions:

$$\text{Grant} \cdot (1-t_1) + (\text{sale value} - \text{debt}) > \text{Present Value} \{ \text{revenues} - \text{costs} - \text{subsidies} - \text{taxes} \} \cdot (1-t_2),$$

where the revenue, cost, tax and subsidy flows are those used to estimate financial viability in Section 5 above. The tax rates  $t_1$  and  $t_2$  are personal income tax rates:  $t_1$  is the personal income tax rate payable on the decommissioning grant, and  $t_2$  is the average personal income tax rate payable on income derived from fishing;  $t_2$  was set at 25% which is the average tax rate on an income of around 80,000 DMs which is approximately the average taxable income of a fisherman, and  $t_1$  was set at 40% to reflect the effect of the decommissioning grant in raising taxable income. Since the sale value is assumed to equal the book value, and since the book value of assets less the debt is the value of the owner's equity, the minimum grant required is given by:

$$\text{Grant} > \frac{1}{(1-t_1)} \cdot [\text{PV} \{ \text{Revenues} - \text{costs} + \text{subsidies} - \text{taxes} \} \cdot [(1-t_2) - (\text{value of owner's equity})]].$$

Tables 5.0-5.4 report estimates of the required decommissioning grant based on the average financial performance of the various categories of vessels in individual years. Two problems with these estimates are that they represent average values whereas the size of the decommissioning grant required for any given level of fleet reduction would be determined by the performance of marginal firms, and that they are based on financial performance in individual years in the recent past. The latter problem can be partially addressed by averaging the estimated grants over the period 1990-94; however it is possible that fishermen's expectations about future performance may be raised by the prospect of firms exiting the industry as a result of the decommissioning program. Assuming that past performance represents expectations about the future condition of the fishery, the average values reported in Row 1 of Table 6 probably overestimate the grants required to induce the marginal firm in each category to leave the industry. It can be seen from Table 6 that based on their financial performance in 1990-94 the average sampled vessel in two of the nine categories would not require the inducement of a grant to leave the fishery: small Baltic seafish vessels, large North Sea seafish vessels. The remaining categories of vessel require grants ranging from 2,500-34,000 DMs.

Several variations to the assumptions underlying, the required grant calculation described above could be considered. One variation is to set the opportunity cost of the owner of the firm's labour at zero to reflect perhaps the options open to an older owner of a fishing vessel: the effect of this adjustment, reported in Row 2 of Table 6 is to increase the size of the required grant. Another variation might be to set the value of the owner's equity equal to zero to take account of the possibility that the book value is substantially in excess of market value. However inspection of Tables 5.0-5.4 reveals that estimates of owner's equity are relatively modest and this issue was not pursued

A further variation to the calculation is to remove the effects of taxes and subsidies. Since the net tax/subsidy position is generally in favour of the firm (the exception is large North Sea seafish vessels), the tax/subsidy regime tends to raise the value of the decommissioning grant, and it is interesting to determine how significant this effect is. However it should be noted that the subsidy data reported by the sampled firms may

include some decommissioning subsidies, thereby overstating the subsidies available to firms which remain in the industry. Row 3 of Table 6 reports estimates of the average grant required in the absence of the tax/subsidy regime. The effects of the removal of the tax/subsidy regime on the average grants required by all categories of vessels are marginal, with a 5% fall in the case of large Baltic seafish vessels being the most significant effect. While the effect of subsidies received and taxes paid in the course of production is not significant, the effect of the capital gains tax is to raise the size of the minimum required grant to a level 67% above the net present value of the firm to its owner. Row 4 of Table 6 reports the average required grants when both the opportunity cost of the owner's labour and the effects of the tax/subsidy regime are removed from the calculation.

As noted earlier, the decommissioning grants available are around 62,500 DMs for a 30-tonne vessel and 125,000 for 50-tonne vessels. On the basis of the estimates reported in Table 6, a 62,500 DM grant should be sufficient to encourage decommissioning of North Sea shrimp and Baltic seafish vessels in the 1-49 tonne category, but the 125,000 DM grant would be sufficient to induce decommissioning of only mid-size North Sea shrimp and large North Sea seafish vessels among the remaining categories.

## **7. Conclusions**

Tables 4.0-4.4 report detailed information on the average economic costs and revenues of sampled fishing firms in Schleswig-Holstein. These estimates suggest that the economic condition of the fisheries over the period 1990-94 has generally not been satisfactory, and has been deteriorating. The revenue and cost information presented in these Tables may be useful to researchers engaged in modeling the economic circumstances of the industry under various conditions. The estimates of financial performance reported in Tables 5.0-5.4 are consistent with the findings on economic performance: firms are generally financially viable if the opportunity cost of the owner's labour is ignored, and the financial position of firms in the industry has been deteriorating. Based on these results a series of estimates of the level of the grants required to induce the average sampled firms TO exit the industry was obtained, these results suggested that current levels of decommissioning grant available are generally inadequate.

One reason that the size of the required decommissioning grant is so high for some categories of vessel is the lack of transferability of the fishing quotas. In effect the decommissioning grant has to compensate the firm for the loss of its share of the catch. When the vessel is decommissioned the quota reverts to the producers' association which can reallocate it to other vessels. If a market existed in transferable quota the producers' association could sell quota surrendered through the decommissioning program and the revenues could be used to offset some of the program's costs. In the case of the Dutch cutter fleet, Davides (1994) has pointed out that there was no need for the Dutch government to buy out the ITQs when vessels were being decommissioned. Skipper/owners could sell their ITQs when they left the fishery.

Another possible reason for high levels of estimated decommissioning grants is the amount of subsidies paid to fishing firms. However the estimates overstate this effect since the reported subsidies include an unstated portion of decommissioning subsidies. The estimates suggest that the required levels of decommissioning grants could be up to 5% larger as a result of the tax/subsidy regime, which is a relatively insignificant impact. However the capital gains tax has a marked effect on the size of

the grant needed to compensate the owner of the firm for giving up the net revenues generated by the on-going activities of the vessel.

## References

Davidse, W.P. (1994) "The ITQ Debate Continued". 7th IIFET Conference, Taipei, pp. 10.

Frost, H. (1994) "The Capacity of the Baltic Fleet in Relation to the Available Resources". South Jutland University Centre, DIFER, Working Paper WP1/94.

Frost, H., P. Sparre, R. Lanters and J. Smit (1995) "The Impact of the EU Decommissioning Scheme with particular reference to Denmark and the Netherlands" ICES Annual Science Conference. September, pp. 33.

<sup>4</sup>[1] H.F. Campbell is with the University of Queensland, Australia, and C.H. Hanf and .M. Brodersen are with the University of Kiel, Germany. The authors wish to thank Mr Jacobsen, Ministry of Food, Agriculture, Forestry and Fisheries, Schleswig-Holstein for assistance in obtaining the data, and Stefan Callsen and Abbas Valadkhani for research assistance. H.F. Campbell wishes to acknowledge the support of a D.A.A.D. Visiting Fellowship at the University of Kiel.

<sup>5</sup>[2] The original sample included some vessels from Mecklenburg-Vorpommern, formerly part of East Germany, and some freshwater fishing vessels. These vessels were excluded from the sample used in the analysis.

<sup>1</sup>[3] The average value of the salary, including social security payments and unadjusted for inflation, of the most experienced crew member of each vessel in the sample over the period 1990-94 was 50.106 DMs

---

**Table 1 : Distribution of the German Fleet by Size and Area of Operation, 1995**

Vessel Size (GRT)	Baltic Sea	North Sea	Total
1-49	1901	364	2265
50-99	12	37	49
≤100	29	68	97
Total	1942	469	2411

**Table 2 : 1994 Sample of Schleswig Holstein Vessel Characteristics by Length**

	Length (metres)				
	6-12	13-18	19-24	25-30	Total
<b>North Sea Principal Species</b>					
Sea fish	2	7	1	6	
Shrimp	3	35	5	1	16
<b>Baltic</b>					44
Sea fish	9	20	4	9	
<b>Total</b>	14	62	10	16	42
					102
Average Year Built	1974	1968	1972	1964	1969
Average Days Fished	127	148	204	230	177
Average Number of Crew					
Non-family	0.33	0.88		1.33	0.94
Family	1.48	1.32	1.2	1.22	1.43
			1.69		

**Table 3 : 1994 Sample of Schleswig Holstein Vessels by Principal Fisheries by Tonnage**

Tonnage	North Sea		Baltic	Total
	Principal Species			
	Sea fish	Shrimp	Seafish	
1-49	5	13	16	34
50-99	3	17	14	34
≥100	5	14	15	34
Total	13	44	45	102

**Table 4.0 : Average values of revenues and costs (excluding taxes and subsidies) for a sample of fishery vessels registered in Schleswig-Holstein, 1990 (DMs)**

Size category of vessel (tonnage)	North Seafish 1-49	Sea Shimp 1-49	Baltic Seafish 1-49	Sea Shimp 50-59	Baltic Seafish 50-59	North Seafish >100	Sea Shimp >100	Baltic Seafish >100
Number of vessels	6	24	10	28	16	20	24	6
Revenues								
Sales and other receipts	177556	247355	170252	254852	217156	761409	319332	279739
Charter fees received	0	142	450	0	613	0	447	0
<b>Sub-total</b>	<b>177556</b>	<b>247497</b>	<b>170702</b>	<b>254852</b>	<b>217768</b>	<b>761409</b>	<b>319779</b>	<b>273739</b>
<b>Costs</b>								
<b>Variable costs</b>								
Trade and services	0	2255	0	5544	0	12128	4647	0
Loading charges	0	2847	0	7777	495	51400	4287	0
Fuel	13370	17045	19392	17616	26510	106639	26266	35121
Travel costs	2860	4918	3298	5057	2086	6760	7046	3840
Navigation fees	226	543	68	1229	187	3176	393	1411
Materials	40	297	722	512	1625	0	533	561
Miscellaneous costs	6319	9028	9150	6927	9856	35826	8684	966
Charter fees	0	0	0	71	0	0	0	0
Hire charges	0	1217	1089	506	179	396	856	569
<b>Sub-total</b>	<b>23417</b>	<b>38151</b>	<b>33719</b>	<b>45239</b>	<b>40939</b>	<b>220326</b>	<b>54722</b>	<b>51159</b>
<b>Fixed costs</b>								
Association fees	1270	499	0	1940	670	9940	1152	1087
Insurance	536B	6242	6532	4561	8878	12383	8925	5797
Wages and salaries	35357	60902	35530	55300	50455	242796	79539	78351
Imputed value of owner's labour	60000	60000	60000	60000	60000	60000	60000	60000
<b>Sub-total</b>	<b>102035</b>	<b>127543</b>	<b>102242</b>	<b>126301</b>	<b>120002</b>	<b>325115</b>	<b>149615</b>	<b>149235</b>
<b>Capital costs</b>								
Maintenance	15334	35728	2743	36970	27767	127720	15354	47540
Depreciation	18855	28972	15080	23819	19492	145535	23081	19633
Average imputed interest rate (%)	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Imputed interest cost of capital	8367	10129	9528	11919	12819	94603	14414	15829
<b>Sub-total</b>	<b>42566</b>	<b>74839</b>	<b>47361</b>	<b>72720</b>	<b>60089</b>	<b>387918</b>	<b>82860</b>	<b>83012</b>
<b>Total costs</b>	<b>158016</b>	<b>240536</b>	<b>163322</b>	<b>244260</b>	<b>221030</b>	<b>913363</b>	<b>287197</b>	<b>263406</b>
Value of invested capital	78270	94750	89130	111500	119920	884970	134840	148070
Economic profit	9538	6861	-12621	10592	-3262	-151954	32582	-3666
PV of perpetual profit	89220	64179	-118061	99085.00	-30516	-1421462	304789	-34295
Rate of return (%)	22.88	17.93	-3.47	20.19	7.97	-6.48	34.85	8.21
Number of days fished	161	171	163	165	166	205	167	153
Total costs per day fished	1045	1410	1128	1479	1326	4466	1716	1656
Variable costs per day fished	146	224	208	274	246	1077	327	335
<b>Total revenue per day fished</b>	<b>1104</b>	<b>1451</b>	<b>1050</b>	<b>1544</b>	<b>1308</b>	<b>3723</b>	<b>1912</b>	<b>1832</b>

**Table 4.1 : Average values of revenues and costs (excluding taxes and subsidies) for sample of fishery vessels registered in Schleswig-Holstein, 1991 (DMs)**

Size category of vessel (tonnage)	North Seafish 1-49	Sea Shimp 1-49	Baltic Seafish 1-49	Sea Shimp 50-59	Baltic Seafish 50-59	North Seafish >100	Sea Shimp >100	Baltic Seafish >100
Number of vessels	6	24	10	24	15	17	17	6
Revenues								
Sales and other receipts	210409	207084	168064	225725	190380	749492	290951	392935
Charter fees received	1167	0	0	0	1053	0	146	0
<b>Sub-total</b>	<b>211576</b>	<b>207084</b>	<b>168064</b>	<b>225725</b>	<b>191433</b>	<b>749492</b>	<b>291097</b>	<b>392935</b>
<b>Costs</b>								
<b>Variable costs</b>								
Trade and services	0	1228	0	7608	0	3631	5577	2837
Loading charges	0	1744	874	8634	0	70339	4976	1922
Fuel	18531	16416	13400	17736	20483	126613	29386	46324
Travel costs	3722	4809	4948	4938	2530	6251	5181	4605
Navigation fees	404	204	55	807	0	2370	686	1554
Materials	0	86	2529	557	2293	0	393	928
Miscellaneous costs	11308	12849	10698	7300	8772	34332	7601	8234
Charter fees	0	0	3872	0	35	0	0	0
Hire charges	2000	501	1019	723	368	787	414	850
<b>Sub-total</b>	<b>35966</b>	<b>37836</b>	<b>37394</b>	<b>48302</b>	<b>34481</b>	<b>244323</b>	<b>54213</b>	<b>67254</b>
<b>Fixed costs</b>								
Association fees	510	926	850	1797	896	9458	1627	5990
Insurance	5936	5902	5212	4879	7131	10794	9576	15943
Wages and salaries	49903	49804	28126	56942	40278	233097	73623	1223689
Imputed value of owner's labour	60000	60000	60000	60000	60000	60000	60000	60000
<b>Sub-total</b>	<b>116349</b>	<b>116632</b>	<b>95188</b>	<b>123617</b>	<b>108305</b>	<b>313349</b>	<b>144826</b>	<b>1305622</b>
<b>Capital costs</b>								
Maintenance	32010	22951	21508	27457	24863	125539	35691	51929
Depreciation	19221	28398	1428	24534	15160	93920	21744	47278
Average imputed interest rate (%)	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Imputed interest cost of capital	11764	8882	7815	14483	7966	91470	13435	23787
<b>Sub-total</b>	<b>63006</b>	<b>60242</b>	<b>30762</b>	<b>66485</b>	<b>47999</b>	<b>310940</b>	<b>70880</b>	<b>123105</b>
<b>Total costs</b>	<b>215321</b>	<b>214711</b>	<b>163344</b>	<b>238404</b>	<b>190785</b>	<b>868612</b>	<b>269920</b>	<b>1495982</b>
Value of invested capital	110050	83090	73110	135480	74520	855660	125680	222520
Economic profit	-3745	-7627	4720	-12679	648	-119120	21177	-1103047
PV of perpetual profit	-35037	-71346	44157	-118607	6064	-1114310	198100	-10318489
Rate of return (%)	7.29	1.51	17.15	1.33	11.56	-3.23	27.54	-485.02
Number of days fished	146	158	157	144	156	206	157	150
Total costs per day fished	1478	1356	1040	1657	1224	4207	1715	9985
Variable costs per day fished	247	239	238	336	221	1183	345	449
<b>Total revenue per day fished</b>	<b>1452</b>	<b>1308</b>	<b>1070</b>	<b>1568</b>	<b>1228</b>	<b>3630</b>	<b>1850</b>	<b>2630</b>

**Table 4.2 : Average values of revenues and costs (excluding taxes and subsidies) for a sample of fishery vessels registered in Schleswig-Holstein, 1992 (DMs)**

Size category of vessel (tonnage)	North Seafish 1-49	Sea Shimp 1-49	Baltic Seafish 1-49	Sea Shimp 50-59	Baltic Seafish 50-59	North Seafish >100	Sea Shimp >100	Baltic Seafish :>100
<b>Number of vessels</b>	4	23	15	29	15	21	10	18
<b>Revenues</b>								
Sales and other receipts	218278	222100	33133	263411	252009	713922	335834	309581
Charter fees received	2092	0	0	107	0	90	0	0
<b>Sub-total</b>	<b>220370</b>	<b>222100</b>	<b>93133</b>	<b>263517</b>	<b>252009</b>	<b>714012</b>	<b>335834</b>	<b>309581</b>
<b>Costs</b>								
<b>Variable costs</b>								
Trade and services	0	965	0	4067	0	3651	5149	0
Loading charges	0	3025	0	9668	93	54425	13146	223
Fuel	15531	20595	9528	20737	29658	106026	26797	48839
Travel costs	2953	4670	3158	5463	3190	9216	5703	2092
Navigation fees	0	570	0	707	0	1143	1149	333
Materials	0	154	1726	738	1222	92	707	9638
Miscellaneous costs	7494	9748	10400	10872	12232	27236	16111	23015
Charter fees	0	0	0	50	0	90	0	0
Hire charges	3000	344	439	374	282	1632	322	301
<b>Sub-total</b>	<b>38978</b>	<b>40071</b>	<b>25240</b>	<b>52697</b>	<b>46677</b>	<b>203813</b>	<b>69084</b>	<b>84441</b>
<b>Fixed costs</b>								
Association fees	0	855	298	2177	1265	9386	1832	2297
Insurance	4490	5955	2440	5502	8284	9763	9896	9083
Wages and salaries	56819	58780	12485	65226	8428	9763	9896	9083
Imputed value of owner's labour	60000	60000	60000	60000	60000	60000	60000	60000
<b>Sub-total</b>	<b>121308</b>	<b>125592</b>	<b>75224</b>	<b>132905</b>	<b>127976</b>	<b>88913</b>	<b>81624</b>	<b>80463</b>
<b>Capital costs</b>								
Maintenance	24095	31056	17478	36454	35157	142106	42185	18243
Depreciation	17135	21129	9367	28513	8696	77460	37775	27447
Average imputed interest rate (%)	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Imputed interest cost of capital	5577	10506	4495	15997	9296	6963	11063	9862
<b>Sub-total</b>	<b>46820</b>	<b>62702</b>	<b>31350</b>	<b>60975</b>	<b>53160</b>	<b>226540</b>	<b>91034</b>	<b>55563</b>
<b>Total costs</b>	<b>197106</b>	<b>228365</b>	<b>131814</b>	<b>266577</b>	<b>227613</b>	<b>519267</b>	<b>241742</b>	<b>220467</b>
Value of invested capital	52166	98280	42048	149848	86960	65137	103491	32254
Economic profit	23264	-6265	-38681	-3059	24195	194745	94092	89113
PV of perpetual profit	217623	-58606	-361846	-23620	226334	1621750	880185	833615
Rate of return (%)	55.29	4.32	-81.30	8.65	38.51	309.67	101.61	107.29
Number of days fished	152	164	174	161	167	199	155	175
Total costs per day fished	1297	1390	756	1659	1363	2611	1562	1257
Variable costs per day fished	191	244	145	328	279	1025	446	481
<b>Total revenue per day fished</b>	<b>1450</b>	<b>1352</b>	<b>534</b>	<b>1540</b>	<b>1506</b>	<b>3590</b>	<b>2169</b>	<b>1765</b>

**Table 4.3 : Average values of revenues and costs (excluding taxes and subsidies) for a sample of fishery vessels registered in Schleswig-Holstein, 1993 (DMs)**

Size category of vessel (tonnage)	North Seafish 1-49	Sea Shimp 1-49	Baltic Seafish 1-49	Sea Shimp 50-59	Baltic Seafish 50-59	North Seafish >100	Sea Shimp >100	Baltic Seafish :>100
<b>Number of vessels</b>	6	11	14	22	14	12	13	17
<b>Revenues</b>								
Sales and other receipts	204584	199570	82502	219929	193687	652147	317422	280899
Charter fees received	0	0	0	91	0	4048	958	0
<b>Sub-total</b>	<b>204584</b>	<b>199570</b>	<b>82502</b>	<b>220020</b>	<b>193687</b>	<b>65614</b>	<b>318380</b>	<b>280899</b>
<b>Costs</b>								
<b>Variable costs</b>								
Trade and services	0	1424	0	4371	3736	3736	2671	0
Loading charges	197	8029	0	17046	58556	58556	15057	3335
Fuel	21876	20710	6618	17279	105034	105034	27651	18238
Travel costs	4644	5087	3172	5606	9013	9013	8661	6545
Navigation fees	0	1130	0	920	1471	1471	692	0
Materials	1011	1205	3394	1837	15510	15510	3259	3714
Miscellaneous costs	13024	9299	7701	8787	26129	26129	9997	52834
Charter fees	0	0	0	0	26	26	0	0
Hire charges	333	658	700	474	2074	2074	249	355
<b>Sub-total</b>	<b>41086</b>	<b>47542</b>	<b>21585</b>	<b>56319</b>	<b>221550</b>	<b>221550</b>	<b>682237</b>	<b>85022</b>
<b>Fixed costs</b>								
Association fees	64	1613	513	1190	1140	8919	1020	3421
Insurance	8664	7307	2567	5913	7204	10842	8546	9323
Wages and salaries	50630	52988	12588	55400	44337	206820	82816	74762
Imputed value of owner's labour	60000	60000	60000	60000	60000	60000	60000	60000
<b>Sub-total</b>	<b>119358</b>	<b>121908</b>	<b>75667</b>	<b>122503</b>	<b>112681</b>	<b>28682</b>	<b>152382</b>	<b>147506</b>
<b>Capital costs</b>								
Maintenance	20505	35732	13359	33386	45841	147865	49559	45110
Depreciation	25085	204889	7277	23627	18092	109340	19000	30852
Average imputed interest rate (%)	1.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Imputed interest cost of capital	8911	13720	3917	16179	8456	81392	11020	9927
<b>Sub-total</b>	<b>54511</b>	<b>254352</b>	<b>24564</b>	<b>73204</b>	<b>72400</b>	<b>338607</b>	<b>79589</b>	<b>85899</b>
<b>Total costs</b>	<b>214955</b>	<b>423802</b>	<b>121816</b>	<b>252026</b>	<b>406631</b>	<b>846738</b>	<b>300209</b>	<b>318428</b>
Value of invested capital	83360	128340	36640	151350	79100	761380	103090	92860
Economic profit	-10371	224231	-39315	-32006	-212943	-190544	18171	-37529
PV of perpetual profit	-97011	-2097579	-367769	-299399	-1991985	-1782447	169984	-351067
Rate of return (%)	-1.75	-164.03	-96.61	-10.46	-258.52	-14;34	28.32	-29.72
Number of days fished	148	164	155	139	171	207	144	180
Total costs per day fished	1451	2591	785	1808	2378	4095	2091	1771
Variable costs per day fished	277	291	139	404	1296	1072	475	473
<b>Total revenue per day fished</b>	<b>1381</b>	<b>1220</b>	<b>532</b>	<b>1579</b>	<b>1133</b>	<b>3174</b>	<b>2218</b>	<b>1562</b>

**Table 4.4 : Average values of revenues and costs (excluding taxes and subsidies) for a sample of fishery vessels registered in Schleswig-Holstein, 1994 (DMs)**

Size category of vessel (tonnage)	North Seafish 1-49	Sea Shimp 1-49	Baltic Seafish 1-49	North Seafish 50-59	Sea Shimp 50-59	Baltic Seafish 50-59	North Seafish >100	Sea Shimp >100	Baltic Seafish :>100
<b>Number of vessels</b>	5	13	16	3	17	14	5	14	15
<b>Revenues</b>									
Sales and other receipts	169476	212727	98472	175166	224274	230273	848393	267619	234780
Charter fees received	0	0	0	0	0	0	24000	1407	0
<b>Sub-total</b>	<b>169476</b>	<b>212727</b>	<b>98472</b>	<b>175166</b>	<b>224274</b>	<b>230273</b>	<b>372392</b>	<b>269025</b>	<b>334730</b>
<b>Costs</b>									
Variable costs									
Trade and services	977	0	0	1718	1295	0	0	2792	0
Loading charges	0	0	0	0	0	3	98986	0	2018
Fuel	18847	22511	8642	23775	20661	25557	132907	30323	31878
Travel costs	3953	7250	2577	4558	6147	3646	10112	7838	10114
Navigation fees	0	550	0	1312	502	0	0	894	107
Materials	0	29	743	48	375	1067			
Miscellaneous costs	5823	9484	7293	20675	14051	11834	52410	14325	24803
Charter fees	0	131	0	515	0	59	24000	0	1530
Hire charges	0	769	637	423	244	239	1245	256	336
<b>Sub-total</b>	<b>29601</b>	<b>40725</b>	<b>19943</b>	<b>51843</b>	<b>43275</b>	<b>42431</b>	<b>319659</b>	<b>6578</b>	<b>70785</b>
<b>Fixed costs</b>									
Association fees	0	1402	293	1401	1917	1173	13677	839	2953
Insurance	7711	9273	3675	7032	6953	8310	11721	10933	10738
Wages and salaries	42686	56551	15536	54300	58699	53733	294550	72835	70847
Imputed value of owner's labour	60000	60000	60000	60000	60000	60000	60000	60000	60000
<b>Sub-total</b>	<b>110427</b>	<b>127236</b>	<b>79556</b>	<b>122733</b>	<b>127570</b>	<b>123216</b>	<b>379948</b>	<b>144607</b>	<b>144537</b>
<b>Capital costs</b>									
Maintenance	34342	35875	180025	25041	31816	35536.93	317944	51823	45908
Depreciation	36014	30092	11897	9184	24727	22231	170749	31368	92503
Average imputed interest rate (%)	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Imputed interest cost of capital	20251	17759	6557	3963	17303	1512	93315	14484	98686
<b>Sub-total</b>	<b>30518</b>	<b>83737</b>	<b>36491</b>	<b>38199</b>	<b>73856</b>	<b>23753</b>	<b>487018</b>	<b>97686</b>	<b>237307</b>
<b>Total costs</b>									
<b>Total costs</b>	<b>220546</b>	<b>251697</b>	<b>135990</b>	<b>212775</b>	<b>244701</b>	<b>189399</b>	<b>1186625</b>	<b>298971</b>	<b>452630</b>
Value of invested capital	169440	166130	61340	370070	161860	14140	919690	135490	925030
Economic profit	-51070	-38970	-37518	-37609	-20427	40874	-314233	-29944	-217840
PV of perpetual profit	-477733	-364550	-350963	-351513	-191086	382353	-2939506	-280114	-2037791
Rate of return (%)	-16.27	-12.77	-50.47	-90.76	-1.93	-299.75	-23.48	-11.41	-12.86
Number of days fished	159	162	141	163	152	190	184	144	236
Total costs per day fished	1391	1551	962	1303	1610	996	6449	2082	1922
Variable costs per day fished	187	251	141	317	285	223	1737	395	301
<b>Total revenue per day fished</b>	<b>1069</b>	<b>1311</b>	<b>697</b>	<b>1072</b>	<b>1475</b>	<b>1211</b>	<b>4741</b>	<b>1874</b>	<b>997</b>

**Table 5 : Average values of revenues and costs (including taxes and subsidies) for a sample of fishing firms registered in Schleswig-Holstein, 1990 (DMs)**

Size category of vessel (tonnage)	North Seafish 1-49	Sea Shimp 1-49	Baltic Seafish 1-49	Sea Shimp 50-59	Baltic Seafish 50-59	North Seafish >100	Sea Shimp >100	Baltic Seafish >100
<b>Number of vessels</b>	6	24	10	28	16	20	24	6
Total annual revenue (including subsidies)	186062	253485	185759	264292	238845	801365	326329	297270
Subsidies	5846	4211	4730	5007	8035	29430	7421	5469
Revenue net of subsidies	180216	249274	181023	259285	230810	771685	320903	291801
Total annual cost (including taxes)	111142	175843	125683	175593	161291	537664	229379	229306
Taxes and levies	1309	1246	6265	1291	3648	521	1324	41869
Costs net of taxes and levies	109833	174597	120424	176302	157643	827143	228055	187437
Imputed value of owner's labour	50000	50000	50000	50000	50000	50000	50000	50000
Total revenue less total cost	24920	27641	9071	34656	27554	-76299	48950	17964
Required rate of return (%)	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Perpetuity factor at required rate	9.35	9.35	9.35	9.35	9.35	9.35	9.35	9.35
Present value of revenue less cost plus reserve fund	233005	258447	84811	324431	257631	-713394	457680	167966
Present value of pro Fit less owner's equity	9828	41298	24638	31672	36320	43956	42912	46221
Required grant	223176	317152	60173	242758	220711	-75729	414788	121744
Required grant net of owner's labour	275425	254742	65080	269957	261027	-966948	501581	133188
Required grant net of taxes and subsidies	296300	275617	65955	290832	281502	-946073	522456	154063
Required grant net of owner's labour taxes and subsidies	273530	253504	65721	268405	259195	-979038	499035	148385
Required grant net of taxes and subsidies	294405	274349	86596	289280	280070	-953163	519910	169260
Number of days fished	161	171	163	165	166	205	163	153
Present value per day fished	1449	1515	522	1965	1548	-3488	2730	1100

**Table 5.1 : Average values of revenues and costs (including taxes and subsidies) for a sample of fishing firms registered in Schleswig-Holstein, 1991 (DMs)**

Size category of vessel (tonnage)	North Seafish 1-49	Sea Shimp 1-49	Baltic Seafish 1-49	Sea Shimp 50-59	Baltic Seafish 50-59	North Seafish >100	Sea Shimp >100	Baltic Seafish :>100
Number of vessels	6	26	10	24	15	17	17	6
Total annual revenue (including subsidies)	2258123	214036	164008	240687	215713	734218	299771	413419
Subsidies	9926	5680	8308	8579	9881	11787	7838	19022
Revenue net of subsidies	215137	208356	175700	232108	205832	752531	291873	394397
Total annual cost (including taxes)	153682	151386	117816	169319	135249	790120	208149	343175
Taxes and levies	72	1348	3374	1149	6805	839	857	17024
Costs net of taxes and levies	153610	150037	114441	168171	128444	789280	207292	326151
Imputed value of owner's labour	50000	50000	50000	50000	50000	50000	50000	50000
Total revenue less total cost	21441	12650	16192	21367	30465	-75902	41622	20244
Required rate of return (%)	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Perpetuity factor at required rate	9.35	9.35	9.35	9.356	9.35	9.35	9.35	9.35
Present value of revenue less cost	200475	118280	151400	199785	284846	-709683	389170	189280
Value of owner's equity plus reserve fund	29923	39594	137784	100651	38324	27134	35955	35686
Present value of profit less owner's equity	173852	78686	137615	99133	246521	-738817	353175	153594
Required grant	206635	82024	166608	82143	292768	-934191	427323	177477
Required grant net of owner's labour	227510	102899	187483	103018	313643	-913316	448198	198352
Required grant net of taxes and subsidies	202521	60215	154549	79041	291483	-938762	424384	175643
Required grant net of owner's labour taxes and subsidies	223336	101090	185424	39916	312358	-917887	445259	197518
Number of days fished	146	158	157	144	155	206	157	150
Present value per day fished	1376	747	964	1388	1627	-3427	2473	1263

**Table 5.2 : Average values of revenues and costs (including taxes and subsidies) for a sample of fishing firms registered in Schleswig-Holstein, 1992 (DMs)**

Size category of vessel (tonnage)	North	Sea	Baltic	Sea	Baltic	North	Sea	Baltic
	Seafish	Shimp	Seafish	Shimp	Seafish	Seafish	Shimp	Seafish
	1-49	1-49	1-49	50-59	50-59	>100	>100	>100
Number of vessels	4	23	15	29	15	21	10	18
Total annual revenue (including subsidies)	231940	232551	103265	274625	269771	728729	343745	371422
Subsidies	9080	8061	8405	9670	14162	12823	5828	53436
Revenue net of subsidies	222860	224490	94860	264755	255609	715906	337917	317936
Total annual cost (including taxes)	135400	166319	72201	202179	181620	706574	257661	249991
Taxes and levies	0	1559	2903	2993	6818	2583	4076	4186
Costs net of taxes and levies	135400	164759	69293	199166	174803	703990	253585	244805
Imputed value of owner's labour	50000	50000	50000	50000	50000	50000	50000	50000
Total revenue less total cost	-16540	16232	-16936	22446	381151	-27845	36084	72431
Required rate of return (%)	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Perpetuity factor at required rate	9.35	9.35	9.35	9.35	9.35	9.35	9.35	9.35
Present value of revenue less cost	435145	151771	-177051	209865	356715	-260349	337387	677232
Value of owner's equity plus reserve fund	16311	36744	22937	79645	36777	29123	42355	16365
Present value of profit less owner's equity	416834	11028	-199988	130220	317939	-269472	295032	660867
Required grant	514440	128732	-260062	125649	382029	-374723	351844	820904
Required grant net of owner's labour	535315	149607	-239187	150724	402904	-353848	372719	841779
Required grant net of taxes and subsidies	510649	126018	-262356	126978	376962	-378998	351112	800342
Required grant net of owner's labour taxes and subsidies	531524	146893	-241481	147853	399637	-358123	371987	821217
Number of days fished	152	164	174	161	167	199	155	175
Present value per day fished	2863	924	-1016	1306	2134	-1309	2179	3860

**Table 5.3 : Average values of revenues and costs (including taxes and subsidies) for a sample of fishing firms registered in Schleswig-Holstein, 1993 (DMs)**

Size category of vessel (tonnage)	North Seafish 1-49	Sea Shimp 1-49	Baltic Seafish 1-49	Sea Shimp 50-59	Baltic Seafish 50-59	North Seafish >100	Sea Shimp >100	Baltic Seafish :>100
Number of vessels	6	11	14	22	14	12	13	17
Total annual revenue (including subsidies)	217715	218488	102952	238411	232775	716520	333830	332219
Subsidies	12276	9312	14666	14652	30669	17331	15124	45658
Revenue net of subsidies	205439	208575	88085	223759	202107	699169	318706	286561
Total annual cost (including taxes)	154564	178716	58902	185768	178760	785505	247425	264972
Taxes and levies	286	1339	988	2665	3490	1706	658	5393
Costs net of taxes and levies	154178	177377	7915	183103	175270	783799	240741	259579
Imputed value of owner's labour	50000	50000	50000	50000	50000	50000	50000	50000
Total revenue less total cost	13251	-10228	-5951	2643	4015	-118985	36405	17247
Required rate of return (%)	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Perpetuity factor at required rate	9.35	9.35	9.35	9.35	9.35	9.35	9.35	9.35
Present value of revenue less cost	123901	-95634	-55639	24711	37543	-1112507	340383	161263
Value of owner's equity plus reserve fund	31920	63925	22333	2665	3490	27611	6685	5393
Present value of profit less owner's equity	91980	-159559	-77972	22047	34053	-1140118	333699	155870
Required grant	101879	-226536	-106984	26501	41195	-1439525	415167	192975
Required grant net of owner's labour	122754	-205661	-86109	47376	63070	-1418650	436042	213850
Required grant net of taxes and subsidies	96373	-230115	-112778	21497	29848	-1446049	411644	176165
Required grant net of owner's labour taxes and subsidies	117748	209241	91903	42372	50723	1425174	432513	197040
Number of days fished	148	164	155	139	171	207	144	180
Present value per day fished	836	-585	-358	177	220	-5381	2371	897

**Table 5.4 : Average values of revenues and costs (including taxes and subsidies) for a sample of fishing firms registered in Schleswig-Holstein, 1994 (DMs)**

Size category of vessel (tonnage)	North	Sea	Baltic	North	Sea	Baltic	North	Sea	Baltic
	Seafish	Shimp	Seafish	Seafish	Shimp	Seafish	Seafish	Shimp	Seafish
	1-49	1-49	1-49	1-49	50-59	50-59	>100	>100	>100
Number of vessels	5	13	16	3	17	14	5	14	15
Total annual revenue (including subsidies)	188366	226878	115729	200394	235574	259627	915349	286172	404462
Subsidies	18715	9653	13330	24567	9838	205522	22666	14764	159215
Revenue net of subsidies	169651	217225	102399	175827	225736	239105	892683	271407	245247
Total annual cost (including taxes)	163844	190093	75477	154520	177662	172450	1134583	247402	31261
Taxes and levies	331	1841	1473	227	1469	2718	6285	2681	4173
Costs net of taxes and levies	163213	188252	74005	154293	176193	169732	1128301	244721	307988
Imputed value of owner's labour	50000	50000	50000	50000	50000	50000	50000	50000	50000
Total revenue less total cost	-25478	-13215	-9748	-4126	7912	37177	-269236	11231	42301
Required rate of return (%)	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69	10.69
Perpetuity factor at required rate	9.35	9.35	9.35	9.35	9.35	9.35	9.35	9.35	9.35
Present value of revenue less cost	-238219	-123559	-91142	-38578	73981	347603	-2517358	-105007	395518
Value of owner's equity plus reserve fund	28157	43069	24111	604	72711	51205	0	3470	-69513
Present value of profit less owner's equity	-266376	-166626	-115253	-39182	1270	296398	-2517356	-139710	326005
Required grant	-345391	-226683	-154421	-49326	-28765	349861	-3152990	-189476	379300
Required grant net of owner's labour	-324516	205808	-133546	-28453	-7891	370736	-3132115	-168601	400175
Required grant net of taxes and subsidies	-352941	-229944	-159371	-59490	-32260	-342428	-3159830	-194521	314570
Required grant net of owner's labour taxes and subsidies	-332066	-209069	-138496	-38615	-11385	363303	-3138955	-173646	335445
Number of days fished	159	162	141	163	152	190	184	144	236
Present value per day fished	-1502	-762	-645	-236	487	1827	-13681	-731	1679

**Table 6: Estimates of Average level of Required Decommissioning Grant 1990-94,DMS.**

	Category of Vessel								
	1- 49 Tonnes			50- 99 Tonnes			> 100 Tonnes		
	North Sea		Baltic	North Sea		Baltic	North Sea		Baltic
	Seafish	Shimp	Seafish	Seafish	Shimp	Seafish	Seafish	Shimp	Seafish
Required grant	150,598	2,456	-57,956	532,032	95,937	265,376	-1,373,375	301,288	340,769
Required grant net of owner's labour	-171,473	23,331	-37,081	552,907	116,812	286,251	-1,355,800	322,163	361,644
Required grant net of tax/ Subsidy	146,126	-65	-60,847	524,892	92,732	260,383	-1,380,535	298,331	323,221
Required grant net of owner's labour and tax/ Subsidy	167,001	20,810	-39,972	545,767	113,607	281,258	-1,359,660	319,206	344,096