An Analysis of the Dependence of the Spanish Fisheries Industry on the Financial Instrument for Fisheries Guidance

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1 Introduction

The European Union seeks to reach the maximum social equilibrium between and economic development of its Member States. Nevertheless, the existing inequalities regarding the income and development of its twenty-five member countries calls for a substantial economic effort and solidarity in the part of the more developed countries towards the less developed ones.

To secure a sustainable development and a high cohesion degree, a set of economic measures and aids within the structural, social and regional scope have been arranged under the name of Structural Funds, both aiming at reducing the gap between the development levels of the various regions and at creating the necessary potential so that the regions can fully contribute to achieving greater growth and competitiveness in different activity sectors.

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One of the activity sectors within the scope of Structural Funds, which is also regulated by European Common policy, is that of EU fisheries affairs, managed through the so-called Common Fisheries Policy (CFP). This very sector is subject to peculiar features being susceptible to the international control of fishing grounds, as well as a great level of competitiveness, which renders it especially liable to the receipt of EU aids in order to promote it as a source of employment, being in dire need of strong investments so as to compete globally.

One of the four EU Structural Funds is destined to systematizing the CFP, namely the Financial Instrument for Fisheries Guidance (FIFG), which has recently been renamed as the EEF, or European Fisheries Fund and, among others, pursues the following goals:

- to make operating structures more competitive and help boost economically viable enterprises in the fisheries sector;
- to promote the purchase and use of Aquaculture gear and fishing methods so as to prevent the decline in fishing activities;
- to contribute to the strengthening of the economic development in areas with an active Fisheries industry and Aquaculture.

The FIFG has based its recent performance upon the 2000-2006 period programme, endowed with 4 100 mil. Euro and aimed at fleet renewal and modernisation of 0 vessels, small-scale coastal fisheries, fishing port facilities and processing and marketing of fishery and Aquaculture products (European Commission, 2008). Regarding the distribution of FIFG structural aids, two distribution sources may be differentiated, in accordance to eligible regions and to Member States, respectively.

As far as eligible areas go, the **s**crapping of fishing vessels has received 11.75% of the funds; the construction of new fishing vessels and modernisation of existing ones has received 20.78%, Aquaculture 7.3%; port facilities 6%; processing and marketing of fishery 15.46%, and others 38.71% (European Commission, 2008).

Regarding Member States, Spain has been the main beneficiary of aid with 43.1%, Italy receives 9.7%, France 6.9%, and Portugal, United Kingdom, Germany and Greece 5.5% each. Along these lines, we may remark upon the relevant contribution made by Spain to the EU Fisheries activity (European Commission, 2008).

Likewise, the existence of databases with detailed information on the economic and financial situation of the Spanish entrepreneurial sector within this activity scope enables us to carry out a case study on the economic-financial activity of the Spanish entrepreneurial sector, measuring the extent in which FIFG funds contribute to its dynamics.

2 The fisheries sector in the European Union

Fisheries and Aquaculture constitute a major sector of activity within the European Union (EU). Even if its contribution to the gross national product of Member States is very reduced, barely representing 1% of the total, it nevertheless constitutes an essential provider of employment in geographical areas where job alternatives are scarce or non-existent, such as Galicia in Spain, the Algarve and the Azores Islands in Portugal, North-eastern Scotland in the United Kingdom, and Southern Greece.

With an average overall production of 7m tonnes in the 2003-2005 period the EU constitutes the second worldwide fishing power after China and is the third within the scope of total harvest with 6m tonnes after China and Peru, according to 2003 data.

The EU fishing fleet consisted of 90 000 vessels in 2005, although these recent years are seeing a substantial reduction in numbers, due to the encumbrances that the sector faces, namely a high competition level, as well as the legal regulations imposed for the control of both catches and fishing grounds, the consequence of which has been nonetheless an enhanced equilibrium between the EU fleet and its fish population.

As regards the Member States' participation in the Fisheries sector, substantial differences are encountered. Along these lines, two gauges restrict the importance of each country within the sector, specifically fleet distribution and employment. Some authors (Jensen and Vestergaard, 2002) have studied the principal characteristics of the fisheries sector. In this paper we have analyzed the fisheries industry.

In accordance with 2005 data and as far as fleet is concerned, six countries concentrate 80% of the total (Greece 20.44%; Italy 16.18%; Spain 15.29%; Portugal 11.10%; France 8.7% and United Kingdom 7.7%). Regarding employment departing from an overall number of

229 702 workers, Spain represents 24.29%, Italy employs 18.34% workers, Portugal 9.29% and Greece 8.22%.

Within the EU and due to its marine geographical positioning – a peninsula between two archipelagos – Spain represents one of the major countries within the EU as far as vessel fleet, fishermen numbers and variety of catches are concerned. In 2005 numbers, its fleet is made up of 13 693 vessels, representing 15% of the EU overall fleet, widespread along the country as a whole: Galicia (48%), Andalusia (15%), Catalonia (9.5%), the Canary Islands (8.5%), Valencia (6.2%) and others 12.8%.

Another consequential issue is the EU Fisheries industry and its situation. This entrepreneurial sector generates an annual production of €17bn, the production levels having increased in terms of 70% in the last ten years, mainly in countries like Spain and France. 80% of the European Fisheries industry is concentrated in eight countries, specifically Spain, France, United Kingdom, Germany, Italy, Greece, Portugal and Denmark. The productivity of this sector has also increased in the recent years, Spain outstandingly so, for the sake of the policies supporting the sector that the EU has exerted through the FIFG. Such measures have also contributed to situate the European entrepreneurial sector within the ten leading ones at global level (Tab. 1).

Tab. 1: Fisheries companies with the highest turnover in 2005

	Company	Country	Turnover	Activities
1	Marine Harvest	Norway	1 600	Aquaculture
2	Icelandic Group	Iceland / Germany	1 200	Frozen seafood, processing
3	Unilever	Netherlands	1 200	Frozen seafood
4	Young's Bluecrest Seafood	U.K. / Sweden	1 200	Chilled, frozen
5	Thai Union Frozen Product	Thailand	1 000	Frozen, canned seafood
6	Pescanova	Spain	999	Integrated wild catch, aquaculture, processing
7	Trident Seafood	USA	669	Integrated wild catch
8	Cermaq	Norway	669	Aquaculture salmon
9	The Bolton Group	Belgium / Italy	650	Canned Seafood

	Company	Country	Turnover	Activities
10	Alfesca	Iceland	600	Fish processing

Note: turnover is expressed in Euro and in British milliard.
Source: European Commission (2008).

Tab. 2 shows the increase in company numbers, classified in tune with staff numbers in the EU countries. We may remark upon the fact that countries like Spain, France and the United Kingdom have experienced an increase in the number of companies with the highest workforce numbers. Spain is particularly remarkable in terms of a significant increase in companies with 50 to 249 employees.

The growing importance of this sector has led to an increase in EU policies and aids, both through the FIFG and through direct finance of companies with national support.

Tab. 2: Number of EU Fisheries Countries in Terms of Workforce

Country	Year	<20	20-49	50-249	>249
Denmark	1999	79	25	33	4
	2003	62	22	29	6
Germany	1999	103	50	10	6
	2003	98	38	20	6
Spain	1999	262	196	38	12
	2003	451	140	86	9
France	1999	363	82	45	9
	2003	357	84	52	12
Ireland	1999	36	35	14	0
	2003	38	32	16	0
Italy	1999	374	40	25	2
	2003	394	37	18	2
Netherlands	1999	115	25	10	5
	2003	90	15	15	5
Portugal	1999	41	37	34	3
	2003	31	28	31	4
United Kingdom	1999	255	63	58	12
	2003	260	63	65	13

Source: European Commission (2008).

Tab. 3 shows the main goals of the awarded funds, remarkably those provided to aquaculture, vessel modernisation, and processing and marketing of products.

Due to the amount of aid provided, an analysis of the companies having aquaculture as their main goal is imperative. We are talking about a procedure aimed at diversifying and livening fishing activities, through a more effective monitoring of raw material production. The EU is increasing those FIFG resources which are destined to promote the creation and development of this type of activity, propping up the Fisheries sector and opening new paths for the upkeeping of fishing activities and fishing grounds.

Tab. 3: Aid provided by FIFG to EU Member States during 2000 – 2006 period (mil. Euro)

Countries	Scrapp -ing	N. Vessels	Vessels R.	Aqua-culture	F.P.F
Belgium		3 730	6 000	4 515	1 850
Denmark	16 800	30 300	40 300	10 600	36 200
Germany	6 700	26 239	15 817	30 616	33 858
Greece	45 175	17 093	15 195	36 798	6 155
Spain	126 364	369 807	103 229	118 083	75 011
France	11 144	35 264	21 926	18 799	8 952
Ireland	4 760	11 690	11 690	25 680	
Italy	104 513	19 190	28 785	8 880	5 925
Netherlands	2 068		6 850	540	
Austria				2 478	
Portugal	18 432	39 112	8 332	630	36 279
Finland	2 500	1 035	2 040	3 800	5 500
Sweden	5 514	8 000	8 000	4 000	5 000
United Kingdom	54 898	9 000	5 650	13 227	15 728

Countries	P. M.	S. M.	O	Total
Belgium	10 081	250	10 610	37 036
Denmark	35 300		35 000	204 500
Germany	82 648	200	30 400	226 478

Countries	P. M.	S. M.	O	Total
Greece	39 113	18 423	33 207	211 159
Spain	280 993	64 324	574 287	1 712 094
France	57 853	9 500	111 044	274 482
Ireland			15 715	69 535
Italy	10 114	481	208 036	385 924
Netherlands		1 000	27 642	38 100
Austria	1 745		803	5 026
Portugal	29 686	4 998	72 276	209 745
Finland	11 054	600	12 424	38 953
Sweden	15 000	1 000	27 553	74 067
United Kingdom	42 547		75 538	216 588

Legends: N. Vessels = new vessels; Vessels R. = vessel renewal; F.P.F = fishing and port facilities; P.M. = processing and marketing; S.M. = socioeconomic measures; O = others; Total = total of resources financed through the FIFG.

Source: European Commission (2008).

Therefore, due to the relevance of the Fisheries sector in Spain and the important amount of aids granted by the EU, an analysis of the economic and financial situation of the sector is deemed as imperative, differentiating between companies dedicated to Aquaculture and the rest of Fisheries companies, with a view to demonstrate whether EU aids are necessary for its maintenance and development, as well as for the improvement of their competitiveness.

The following questions are raised: is the fishing activity economically profitable? Are the companies in the sector in a state of economic and financial stability? And, even, would it be nowadays feasible for this sector to become competitive outside the CAP? These questions are to be answered below, by means of an aggregate study on the economic and financial situation of the companies that make up the Fisheries sector in Spain, as a major EU country.

3 Methodology

3.1 Objectives

The goal of the present study is -upon the basis of the relevant gauges of Financial Statements- to accomplish a ratio study so as to find out about their economic and financial situation, and hence, detect strengths and weaknesses in the companies that make up the Fisheries sector in Spain in the years 2003, 2004 and 2005.

Following Amat's taxonomy, (2000, p. 20), we may arrange our objectives regarding both the financial and the economic situation that they are in.

a) Financial situation: we aim at getting to know the entrepreneurial economic capacity at aggregate level to meet the short and long-term debts of those companies, testing the dependence degree on exogenous resources of Spanish companies, and the extent to which the Structural Funds contribute to alleviate this financial deficit.
b) Economic situation, which has as its main goal the analysis of the profitability of companies in a double bearing: for the company itself (economic profitability), and for the shareholders (financial profitability).

3.2 Sample

To carry out the present study, we have endeavoured to analyse the period ranging the evolution of the three consecutive financial years, from 2003 to 2005, deploying the SABI[1] database (February 2008) as a source of information to this effect. Such database has enabled us to seek and obtain information about the total of Spanish companies involved in the Fisheries sector, 715 companies all in all. From these we have selected those that configure the activity sector (CNAE[2] 05) "Fisheries,

[1] SABI, or *Sistema de Análisis de Balances Ibéricos* ("Iberian Balance Systems") is the *Informa* company database. Such database includes and offers, among others, the Annual Accounts data of Spanish and Portuguese companies.

[2] The *Clasificación Nacional de Actividades Económicas* ("National Economic Activity Classification") or CNAE was passed under ROYAL DECREE 1560/1992 in Spain, dated December 18th. BOE nº 306.

Aquaculture and activities involved in those services", which amount to 552 companies overall.

From the total of selected companies we have rejected 5%, as they are companies with atypical values in their ratios, as well as those companies rated under CNAE 0500. Therefore, we have carried out the analysis on a depurated sample of 507 companies.

Subsequently, we have again divided these companies under a four-digit CNAE arrangement in order to achieve a closer analysis of those. Hence, the study shall be undertaken on the companies belonging to CNAE 0501 Fisheries (415 companies) and CNAE 0502 Aquaculture (92 companies).

3.3 Variables

To attain the objectives set out from the onset, and consequently to determine the situation of those companies belonging to the Fisheries industry, we have deployed the univariant analysis technique, i.e., in the individualized study of a previously selected set of economic and financial indicators.

To this end, we focused in the following previous studies as AECA (1998, pp. 85-93); Amat et al. (2000, pp. 17-22); Bernstein (1995), Dickinson and Lewis (1985); Fitzpatrick (1932); Font and Elvira (2001, pp. 19-35); Foster (1986); Horrigan (1968); Jiménez et al. (2000); Lev (1978); Luengo et al. (2005, p. 22); Ohlson (1980); Rodríguez (1994); Bureau Van Dijk (2008); Sanz Santolaria (1999, pp. 10-19, 46-57); Watson and Everett (1999); Woelfel (1993). These studies have been taken as a point of reference in the field of Financial Statement Analysis, as well as the European indicators contained in the SABI database. Tab. 4 shows the ratios included in the analysis.

Tab. 4: Selected Ratios

ID	Name	Description
1	Return on Shareholders Funds	$\frac{Returns\ before\ Taxation}{Capital\ Funds} \cdot 100$

ID	Name	Description
2	Return on Total Assets	$\frac{Returns\ before\ Taxation}{Total\ Assets} \cdot 100$
3	Profit Margin	$\frac{Returns\ before\ Taxation}{Operating\ Income} \cdot 100$
4	Current Ratio	$\frac{Current\ Assets}{Current\ Liabilities}$
5	Liquidity Ratio	$\frac{Current\ Assets\ -\ Inventories}{Liquid\ Liabilities}$
6	Structure Ratio1	$\frac{Shareholder's\ Equity}{Total\ Financial\ Structure}$
7	Structure Ratio 2	$\frac{Current\ Liabilities}{Total\ Financial\ Structure}$
8	Bankruptcy Margin	$\frac{Total\ Assets}{Total\ Liabilities}$
9	Fixed Assets Cover	$\frac{Non\text{-}current\ Assets}{Non\text{-}current\ Liabilities}$
10	Consistency	$\frac{Non\text{-}current\ Assets}{\left(\begin{array}{l}Shareholder's\ Equity\\ +\ Non\text{-}current\ Liabilities\end{array}\right)}$
11	Indebtedness	$\frac{Total\ Liabilities}{Shareholder's\ Equity}$

4 Results

We endeavour to demonstrate below the results obtained for the two activities under analysis, specifically CNAE 0501 (Fisheries) and CNAE 0502 (Aquiculture). To that aim, we offer the following information for each of the ratios scrutinized:

- the sector mean;
- the sector median;
- the standard deviation;

- the minimum value obtained per company;
- the maximum value obtained per company;
- 10, 25, 50, 75 and 90 percentiles. Such percentiles shall enable us to assess and scrutinize more closely the potential existing differences between the sector mean and median. Along these lines, we have been informed that the companies under each of those percentiles have a lower value than the percentile itself. For example, the median coincides with percentile 50, consequently every company under percentile 50 (mean) have a lower value regarding that very indicator.

In order to see if there were differences statistically significant between both industries, we also carried out an ANOVA. We will also show the results obtained.

4.1 Result of the ratios analysed

4.1.1 Return on shareholders funds

The analysis on financial profitability will report, departing from capital funds, on the profitability obtained by the company through its activity.

Regarding Fisheries (CNAE 0501) the results obtained show how the indicator deteriorates with time. This fact is to be remarked both about the mean and the median, both being negative in value. The percentile analysis shows how half of the companies offer a negative profitability, but close to 0, being 2005 the year with the sharper increase.

Tab. 5a: Statistics 0501

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	–7.9254	–3.6400	141.05171	–851.45	874.91
2004	–7.9430	–0.7500	118.36626	–939.56	874.11
2003	–7.697	–1.640	140.4954	–882.0	869.5

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	–91.4620	–34.5550	–3.6400	20.0950	76.8980
2004	–69.4950	–25.9450	–0.7500	21.8000	70.8740
2003	–68.460	–23.410	–1.640	16.960	63.141

Source: author's calculation.

However, the Aquaculture industry (CNAE 0502) offers better results, especially in terms of the profitability obtained in 2005.

Tab. 5b: Statistics 0502

	Mean (%)	**Median (%)**	**Standard deviation**	**Minimum**	**Maximum**
2005	14.0174	7.1700	81.70613	–437.81	382.54
2004	–6.4777	4.4800	150.08198	–871.55	300.74
2003	6.328	6.090	93.8098	–285.2	355.0

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	–31.1470	–12.1950	7.1700	30.4225	93.1690
2004	–52.0360	–12.9700	4.4800	22.0600	62.5120
2003	–99.586	–14.200	6.090	19.180	94.374

Source: author's calculation.

4.1.2 Return on total assets

The study on profitability of assets or investments, that is, the perusal of economic profitability, is a gauge of the company assets yield, no matter the means of financing it has deployed.

It shows the capacity of assets to generate value and, consequently, it is a relevant indicator of company competitiveness (Luengo et al., 2005, p. 13).

The Fisheries industry (Tab. 6a) shows that both the mean and the median offer negative values, above 1, for the three years, even if

percentile analysis shows that at least 25% of the companies offer positive profitability also above 0.

Tab. 6a: Statistics 0501

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	–4.2507	–3.1000	14.67579	–144.26	63.38
2004	–2.5969	–1.8350	14.30885	–145.34	76.15
2003	–1.8950	–1.4800	13.41158	–107.54	86.85

	Percentiles				
	10	25	50	75	90
2005	–16.5420	–8.9100	–3.1000	1.7400	6.9620
2004	–15.7040	–7.5125	–1.8350	2.5850	9.1110
2003	–14.9740	–6.6425	–1.4800	3.0175	9.5160

Source: author's calculation.

However, the sector of aquiculture offers data indicating that the median already offers positive results, which demonstrates that at least 50% of the companies offer positive profitability.

Tab. 6b: Statistics 0502

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	0.9832	0.4200	9.39952	–21.83	41.94
2004	–1.0704	0.8100	12.16887	–61.81	39.49
2003	–1.8133	0.4900	10.83144	–34.75	20.75

	Percentiles				
	10	25	50	75	90
2005	–9.6460	–4.7800	0.4200	5.9000	12.1940
2004	–14.4500	–5.2300	0.8100	4.8700	9.7700
2003	–16.6920	–5.7000	0.4900	4.7800	9.2820

Source: author's calculation.

In general terms, the difference between the Fisheries sector and aquiculture may lie in the fact that the latter needs less investment in assets than the former.

4.1.3 Profit Margin

The present margin gauges the profits obtained per sold monetary unit, that is to say, sales profitability (Luengo et al, 2005, p. 15). This ratio is a component of the economic profitability ratio.

Regarding the Fisheries industry, and in line with the results obtained, we may remark upon the fact that both mean and mean show negative data confirming the economic results observed in the previous ratio (economic profitability). In addition, their evolution renders a deteriorating trend with the passing of time.

Tab. 7a: Statistics 0501

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	–9.6602	–4.4800	41.72007	–774.83	74.16
2004	–6.6452	–2.5950	18.46190	–159.07	66.27
2003	–6.9782	–1.9900	35.70201	–469.52	161.98

	Percentiles				
	10	25	50	75	90
2005	–28.0120	–15.1900	–4.4800	1.5800	7.4360
2004	–28.0840	–13.7300	–2.5950	2.5625	9.0430
2003	–30.2520	–10.8700	–1.9900	2.7100	10.5960

Source: author's calculation.

Nevertheless, the Aquaculture industry still shows negative indicators, but nonetheless and unlike the Fisheries industry, the median shows higher analyses for the three financial years, with at least 50% positive results.

Tab. 7b: Statistics 0502

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	–6.8593	0.3300	44.58104	–388.54	45.61
2004	–9.6598	1.4700	53.97515	–453.52	38.08
2003	–23.8288	0.7800	99.84626	–827.76	25.37

	Percentiles				
	10	25	50	75	90
2005	–23.5560	–6.6600	0.3300	7.2000	12.4400
2004	–37.0080	–6.2800	1.4700	6.1100	14.3360
2003	–52.8980	–18.9450	0.7800	3.8175	10.0200

Source: author's calculation.

4.1.4 Current ratio

This traditional ratio indicating creditworthiness shows the extent to which companies are able to cover their short-term debt with current assets. Even if it has been accepted by different authors that its value must be approximately 1.5-2, certainly an ideal value cannot be achieved. However, at least its assessment must be over 1, because in the opposite case current liabilities would surpass short-term assets, indicating that the working fund or current assets are negative.

At first sight, the companies within the Fisheries sector have not obtained an mean value for that indicator, since 50% of the companies have got values below 0.94, 0.82 and 0.79 for the years 2005, 2004 and 2003 respectively. This would indicate a negative value for company current assets. (Tab. 8a).

Tab. 8a: Statistics 0501

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	1.3570	0.9400	1.58666	0.00	12.78
2004	1.3394	0.8200	2.04289	0.00	26.80
2003	1.3953	0.7900	2.67691	0.00	39.32

	Percentiles				
	10	25	50	75	90
2005	0.2200	0.4400	0.9400	1.5800	2.9360
2004	0.1700	0.3475	0.8200	1.4825	3.0800
2003	0.1840	0.3600	0.7900	1.5600	2.9040

Source: author's calculation.

For the Aquaculture industry, mean values approach those of the Fisheries sector, even if mean results show better figures for the three years (Tab. 8b).

Tab. 8b: Statistics 0502

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	1.6085	1.1000	1.76309	0.14	12.35
2004	1.7270	1.0300	2.96929	0.24	26.35
2003	1.6059	1.0600	2.18950	0.03	13.72

	Percentiles				
	10	25	50	75	90
2005	0.4820	0.7100	1.1000	1.6700	2.9460
2004	0.4400	0.6500	1.0300	1.7050	3.2700
2003	0.2780	0.6200	1.0600	1.7500	2.9860

Source: author's calculation.

4.1.5 Liquidity ratio

Amongst creditworthiness ratios, this very ratio is the one providing a more accurate information than that offered by the current ratio, since we are about to show the weight inventories have for the activities under analysis. Along these lines, this acid test is to indicate the extent to which companies are capable to reimburse their debts at a short-term basis, exclusively through liquidity and collecting rights, Hence, this very ratio departs from the most extreme situation, namely the extent to which companies would be able to face short-term debts in case they sold no invertories whatsoever.

As we can see, both industries receive similar values, an approximate 1-1.2 mean, and a median close to 0.6. These values are close to those expected for this ratio (Tab. 9a and Tab. 9b).

Tab. 9a: Statistics 0501

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	1.1700	0.6700	1.53468	0.00	12.78
2004	1.1140	0.5750	1.87488	0.00	24.16
2003	1.2016	0.5500	2.59217	0.00	37.51

	Percentiles				
	10	25	50	75	90
2005	0.1600	0.3200	0.6700	1.3600	2.7120
2004	0.1070	0.2400	0.5750	1.2300	2.5450
2003	0.1140	0.2300	0.5500	1.3600	2.5020

Source: author's calculation.

Tab. 9b: Statistics 0502

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	1.0475	0.5600	1.57470	0.01	9.81
2004	1.0301	0.5100	1.80887	0.04	13.33
2003	.9300	0.4600	1.59158	0.00	10.72

	Percentiles				
	10	25	50	75	90
2005	0.0420	0.2400	0.5600	1.1000	2.3060
2004	0.1100	0.2250	0.5100	0.9700	2.2400
2003	0.0640	0.2100	0.4600	1.0800	1.9900

Source: author's calculation.

4.1.6 Structure Ratio 1

This structure ratio is to show the weight of Shareholder's Equity over the financial structure at large.

A first combined analysis of both activities (Fisheries and Aquaculture) is their high indebtedness level, regarding the portion of Shareholder's Equity over the financial structure as a whole. Thus, Shareholder's Equity means a 25%-30% mean for the three financial years under scrutiny, debt consequently representing 75%, which is an index of the dependence on exogenous funds that this industry suffers from. (Tab. 10a and Tab. 10b).

Tab. 10a: Statistics 0501

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	25.364	20.860	26.6470	–47.1	91.6
2004	28.430	21.960	30.1666	–109.3	100.0
2003	29.292	24.550	32.0415	–240.6	100.0

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	–1.762	7.640	20.860	44.750	61.248
2004	–2.012	7.520	21.960	50.510	72.202
2003	–1.191	6.808	24.550	50.983	71.825

Source: author's calculation.

Tab. 10b: Statistics 0502

	Mean (%)	**Median (%)**	**Standard deviation**	**Minimum**	**Maximum**
2005	30.301	26.220	23.9410	–6.8	91.5
2004	30.645	22.140	26.7759	–13.6	97.9
2003	30.884	22.870	27.5738	–14.1	98.4

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	3.528	9.770	26.220	47.110	66.756
2004	1.650	9.335	22.140	48.830	73.780
2003	2.200	8.695	22.870	49.815	76.420

Source: author's calculation.

4.1.7 Structure Ratio 2

The previously estimated structure ratio has allowed us to confirm the high indebtedness level that lies in the financial structure of the entrepreneurial sector within the Fisheries and Aquaculture industries. A second structure indicator such as the present constitutes a step forward towards the calculation of current or short-term debt and its weight upon financial structure.

As we can see, this weight is certainly high, if we take into account the fact that the Fisheries industry (Tab. 11a) reaches 40% values during the three financial years, going up to 50% for Aquaculture. Such a fact is confirmed by the data in percentile 90, whereby for 90% of these companies this proportion represents a 75% mean, coming up to 80% for the Aquaculture industry.

Tab. 11a: Statistics 0501

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	0.4221	0.3866	0.22126	0.01	1.38
2004	0.4421	0.4186	0.25504	0.00	1.90
2003	0.4382	0.3961	0.28636	0.00	3.40

	Percentiles				
	10	25	50	75	90
2005	0.1702	0.2569	0.3866	0.5396	0.7431
2004	0.1465	0.2582	0.4186	0.5854	0.7657
2003	0.1433	0.2594	0.3961	0.5765	0.7651

Source: author's calculation.

Tab. 11b: Statistics 0502

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	0.5062	0.5052	0.24828	0.05	1.07
2004	0.5323	0.5066	0.27105	0.02	1.14
2003	0.5321	0.5070	0.27336	0.00	1.13

	Percentiles				
	10	25	50	75	90
2005	0.1787	0.3029	0.5052	0.6717	0.8338
2004	0.1808	0.2994	0.5066	0.7316	0.9192
2003	0.1663	0.3143	0.5070	0.7335	0.8888

Source: author's calculation.

4.1.8 Bankruptcy margin

The Bankruptcy margin ratio will show the extent to which the company can deal with debts by means of assets. The ratio must be, at least, higher than 1, and its increase goes hand in hand with creditworthiness quality. In the opposite case, the company would be

unable to meet its debts with its assets as a whole, and would consequently be on the verge of an actual winding up. All in all, this ratio unveils a potential situation of disequilibrium for the company.

As it is patent from our data, the entrepreneurial sector within the Fisheries and Aquaculture industries are situated above one during the three financial years. In any case, and with the due caution, we should also mention that also in both cases, 25% of the companies have obtained a value lower than 1.10 (percentile 25) during the period under analysis.

Tab. 12a: Statistics 0501

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	1.6617	1.2528	1.23271	0.68	11.89
2004	1.9756	1.2819	2.32062	0.48	32.28
2003	1.9084	1.3059	2.12565	0.29	30.02

	Percentiles				
	10	25	50	75	90
2005	0.9823	1.0801	1.2528	1.8102	2.5418
2004	0.9743	1.0804	1.2819	1.9953	3.4165
2003	0.9874	1.0680	1.3059	1.9215	3.4045

Source: author's calculation.

Tab. 12b: Statistics 0502

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	1.7293	1.3108	1.47045	0.94	11.77
2004	1.8063	1.2579	1.31514	0.88	7.92
2003	2.6808	1.2847	8.35417	0.88	75.00

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	1.0367	1.1054	1.3108	1.8267	2.4631
2004	1.0269	1.0964	1.2579	1.8698	3.4946
2003	1.0285	1.0948	1.2847	1.9416	2.6610

Source: author's calculation.

4.1.9 Fixed Assets Cover

This indicator is liable to show the degree in which fixed assets are financed with constant financial sources. Their value must be lower than one (< 1 value), which would actually indicate that current assets are financed by means of constant sources. In the opposite case, if the value were higher than one, it would reveal that the companies are financing their fixed assets or non-current assets with current or short-term liabilities.

This is indirectly connected to the ratio (Current Assets/Current Liabilities) and confirms the results obtained in it, constituting the disequilibrium or lack of stability mean in the sector. Regarding the mean, this takes place in a higher degree in the Fisheries industry, to the detriment of the Aquaculture one.

Tab. 13a: Statistics 0501

	Mean (%)	**Median (%)**	**Standard deviation**	**Minimum**	**Maximum**
2005	1.2718	1.0342	1.78159	–3.05	29.08
2004	1.5684	1.0963	6.09303	–19.00	117.00
2003	1.7520	1.1212	6.04515	–14.50	93.59

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	0.3278	0.7180	1.0342	1.4512	1.9910
2004	0.3220	0.7582	1.0963	1.5705	2.1574
2003	0.2629	0.7111	1.1212	1.5128	2.3402

Source: author's calculation.

Tab. 5: Tab. 13b: Statistics 0502

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	2.0858	0.8133	7.19500	–2.43	59.25
2004	–3.1902	0.8184	38.13924	–346.00	9.97
2003	1.1229	0.8562	3.91931	–16.91	22.08

	Percentiles				
	10	25	50	75	90
2005	0.2843	0.5441	0.8133	1.2882	2.1674
2004	0.1362	0.4488	0.8184	1.3437	2.6729
2003	0.1877	0.5576	0.8562	1.5952	3.0691

Source: author's calculation.

4.1.10 Consistency

This indicator is a guarantee ratio for long-term creditors, as it indicates the extent to which reimbursement of debt is guaranteed with non-current assets in the future. It must be higher than one (> 1 value). The results obtained show values higher than one, and, hence, positive ones, in both industries. This indicator guarantees companies to meet their long-term debts (Tab. 14a Tab. 14b).

Tab. 14a: Statistics 0501

	Mean (%)	Median (%)	Standard deviation	Minimum	Maximum
2005	3.9071	1.8870	8.88077	0.00	110.33
2004	8.2491	2.3575	24.85178	0.04	306.98
2003	8.1720	2.4669	19.84869	0.03	224.38

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	0.9016	1.2750	1.8870	3.2397	6.4950
2004	1.1034	1.5076	2.3575	4.5006	15.5290
2003	1.0774	1.5124	2.4669	5.2000	15.9675

Source: author's calculation.

Tab. 14b: Statistics 0502

	Mean (%)	**Median (%)**	**Standard deviation**	**Minimum**	**Maximum**
2005	23.0691	2.0313	74.97880	0.31	433.50
2004	12.8602	2.2945	37.05963	0.05	274.50
2003	14.4553	2.9341	39.76447	0.09	274.50

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	0.7151	1.1277	2.0313	4.3291	30.3043
2004	0.6818	1.3497	2.2945	5.3536	37.6833
2003	0.7264	1.3912	2.9341	9.3450	26.8462

Source: author's calculation.

4.1.11 Indebtedness

This indebtedness ratio shows the proportion of indebtedness with Shareholder's Equity. It attempts to confirm the previously calculated structure ratio, wherein we have reckoned the low weight that Shareholder's Equity has as regards the financial structure as a whole.

Tab. 15a: Statistics 0501

	Mean (%)	**Median (%)**	**Standard deviation**	**Minimum**	**Maximum**
2005	9.0442	2.1681	54.85548	–310.60	501.00
2004	10.1927	1.8233	98.07409	–89.38	1908.00
2003	0.1153	1.7527	79.52637	–1075.00	389.00

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	–4.5149	0.7225	2.1681	6.5463	16.8611
2004	–3.7827	0.5320	1.8233	5.7396	16.1266
2003	–5.0013	0.4877	1.7527	5.6662	19.2056

Source: author's calculation.

Tab. 15b: Statistics 0502

	Mean (%)	**Median (%)**	**Standard deviation**	**Minimum**	**Maximum**
2005	7.7238	2.7149	25.81841	–28.22	206.20
2004	–6.0033	2.5317	85.84894	–625.00	133.00
2003	3.9163	2.4762	14.56562	–70.86	60.64

	Percentiles				
	10	**25**	**50**	**75**	**90**
2005	0.3404	1.1091	2.7149	7.4609	17.1870
2004	0.1959	0.8600	2.5317	6.4637	20.1815
2003	0.1198	0.8284	2.4762	8.0028	17.4896

Source: author's calculation.

4.2 Result of ANOVA

As we posed before, we also carried out an Analysis of the Variance (ANOVA), through which we endeavour to show if there are differences statistically significant between both industries. In order to make this, we studied the existence of these possible differences for all different ratios in each of the three years analysed.

Tab. 16: ANOVA per Industry Code

Ratio ID	**Year**	**ANOVA**	**Sig.**
1	2005	$F_{(1, 493)} = 2\ 025$; P> 0.1	n.s
	2004	$F_{(1, 484)} = 0.010$; P> 0.1	n.s.
	2003	$F_{(1, 457)} = 0.752$; P> 0.1	n.s.

Ratio ID	Year	ANOVA	Sig.
2	2005	$F_{(1, 504)} = 10.610$; P< 0.01	***
	2004	$F_{(1, 493)} = 0.874$; P> 0.1	n.s.
	2003	$F_{(1, 467)} = 0.003$; P> 0.1	n.s.
3	2005	$F_{(1, 504)} = 0.328$; P> 0.1	n.s
	2004	$F_{(1, 485)} = 0.815$; P> 0.1	n.s
	2003	$F_{(1, 453)} = 6.746$; P< 0.01	***
4	2005	$F_{(1, 504)} = 1.799$; P> 0.1	n.s
	2004	$F_{(1, 493)} = 2.192$; P> 0.1	n.s
	2003	$F_{(1, 464)} = 0.449$; P> 0.1	n.s
5	2005	$F_{(1, 504)} = 0.471$; P> 0.1	n.s
	2004	$F_{(1, 493)} = 0.148$; P> 0.1	n.s
	2003	$F_{(1, 464)} = 0.842$; P> 0.1	n.s
6	2005	$F_{(1, 504)} = 2.647$; P> 0.1	n.s
	2004	$F_{(1, 494)} = 0.425$; P> 0.1	n.s
	2003	$F_{(1, 470)} = 0.190$; P> 0.1	n.s
7	2005	$F_{(1, 504)} = 10.304$; P< 0.01	***
	2004	$F_{(1, 494)} = 8.936$; P< 0.01	***
	2003	$F_{(1, 470)} = 7.538$; P< 0.01	***
8	2005	$F_{(1, 484)} = 0.191$; P> 0.1	n.s
	2004	$F_{(1, 479)} = 0.418$; P> 0.1	n.s
	2003	$F_{(1, 449)} = 2.452$; P> 0.1	n.s
9	2005	$F_{(1, 484)} = 3.995$; P< 0.05	**
	2004	$F_{(1, 479)} = 5.558$; P< 0.05	**
	2003	$F_{(1, 450)} = 0.785$; P> 0.1	n.s
10	2005	$F_{(1, 443)} = 22.830$; P< 0.01	***
	2004	$F_{(1, 422)} = 1.646$; P> 0.1	n.s
	2003	$F_{(1, 400)} = 3.629$; P< 0.1	*
11	2005	$F_{(1, 484)} = 0.045$; P> 0.1	n.s.
	2004	$F_{(1, 479)} = 1.970$; P> 0.1	n.s.
	2003	$F_{(1, 449)} = 0.179$; P> 0.1	n.s

Legends: Ratio ID: 1 = Return on Shareholders Funds; 2 = Return on Total Assets; 3 = Profit Margin; 4 = Current Ratio; 5 = Liquidity Ratio; 6 = Structure Ratio 1; 7 = Structure Ratio 2; 8 = Bankruptcy Margin; 9 = Fixed Assets Cover; 10 = Consistency; 11 = Indebtedness.

Sig.: *** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.1$; n.s. = no significance.

Source: author's calculation.

The results obtained show (Tab. 16) that no remarkable differences have been found between both industries in most of the ratios and years analyzed. Just five of the eleven ratios show noteworthy differences for both industries (mainly in 2005).

These ratios are Return on total assets (2005); Profit Margin (2003); Structure ratio 2 (2003, 2004 and 2005); Fixed Assets cover (2004 and 2005) and Consistency (2003 and 2005). These results confirm that Aquaculture industry shows, in relation to fisheries industry, a higher economic profitability; a higher weight of current liabilities on the financial structure and a higher consistency of non-current assets on non-current liabilities.

Conclusion

The goal pursued in the present article has been to endeavour an analysis of the European Union (EU) Fisheries sector condition, highlighting the relevance of the fishing policy in the EU and trying to give an account of the FIFG Structural Funds awarded to Member States.

Such an analysis has bad as a departing ground Spain as a Member State, as this is the main beneficiary of the FIFG Funds, with a 43%, due to the fact that the country boasts 15% of the fleet, absorbing the highest employment figures (24.29% in 2005) and is the greatest fish producer, together with France.

Hand in hand with macroeconomic data, we focus our interest in the economic and financial conditions of this entrepreneurial sector, gauging the extent to which they are dependent on the receipt of Structural Funds to be competitive.

With a view to accomplish this aim, we have carried out a case study in Spain, selecting the companies involved in this activity, subsequently classifying them in the Fisheries and Aquaculture entrepreneurial sectors, respectively. The SABI database has been the foundation of the present study, as statistical survey on a final sample of 507 companies has been carried out, of which we have perused 11 ratios for the 2003-2005 period.

Our research has confirmed that, for the Fisheries industry, profitability is negative or close to zero, which indicates that it is not a very appealing sector for private capital investment. Likewise, economic profitability

also presents –3% mean and –1% median as negative data for the three financial years under analysis, which the data provided by profit margins confirms.

A short-term creditworthiness analysis has demonstrated that these companies have not obtained a good value, showing a negative turnover fund. This is additionally confirmed by a fixed assets cover analysis, which corroborates the lack of balance or disequilibrium of the sector on average. However, facing these results the acid test shows us that the Fisheries industry would actually be capable to meet short-term debt, solely with cash assets and collecting rights.

A high level of indebtedness in financial structure is to be inferred from the structure analysis, the proportion of current liabilities being correspondingly high.

Regarding bankruptcy margin, even if companies have values over 1, almost 25% of the companies approach 1. To guarantee this bankruptcy margin, the consistency indicator confirms how companies can actually guarantee long-term debt.

Summarizing, the Spanish Fisheries industry enjoys poor profitability figures, showing a certain lack of balance regarding fixed assets financing. In addition, they have a high level of indebtedness, especially short-term. On the other hand, companies reasonably may meet short-term payments with cash and rights in the worst case scenario, namely the impossibility to sell catches. They also enjoy a wide margin for bankruptcy, being able to guarantee long-term debt reimbursement with fixed assets.

As regards Aquaculture, it is worth highlighting that most of the ratios under scrutiny show similar or even better results than those given to Fisheries, even if in many cases the companies involved in the sector show higher indebtedness levels. This similarity between Fisheries and Aquaculture industries was confirmed by the ANOVA made.

All in all, we may conclude, in tune with the data inferred, that the EU public investment constitutes an imperative to guarantee the economic and financial feasibility of this sector, which is so relevant where guaranteeing the upkeeping of employment levels and the economic activity in certain European regions are involved.

Additionally, the data show the difficulties to compete of this entrepreneurial sector, which could not manage without the receipt of aids destined to increase their profitability and strengthen their economic and financial structure.

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An Analysis of the Dependence of the Spanish Fisheries Industry on the Financial Instrument for Fisheries Guidance

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ABSTRACT

Fisheries are an important economic sector in the EU subject to an important restructuring in the most recent years. The Financial Instrument for Fisheries Guidance (FIFG) has been the tool deployed by the European authorities to increase the competitiveness and to modernize this industry. As far as Spain is concerned, it has been verified that it is the European country receiving more funds in the recent years. The aim of this paper is to examine the financial situation of the Spanish fisheries firms, determining their indebtedness, solvency, and profitability. We also analyse if those firms included in the Fisheries sector show differences statistically significant. Along the same lines, one of the aims of the study is to carry out an analysis of the financial needs of these firms, considering the extent to which the European funds received along the latest years may have helped Fisheries the industry in Spain.

Key words: Fisheries; FIFG; Financial analysis.

JEL classification: G32, Q22.