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**Subsidies in Irish Fisheries:
Saving Rural Ireland?**

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Abstract

Subsidies in the world's fishing industry have long been considered to have harmful effects on fish stocks. The fishing industry has suffered from overcapacity for many years, and subsidies encourage investment, leading to greater capacity and more pressure on fish stocks, many of which are already exploited close to extinction. However, this paper argues, that not all fishery subsidies have this effect on the fish resource. In Ireland, there is evidence suggesting that fishery subsidies are used increasingly for the purpose of employment creation in disadvantaged regions, through land-based investments, rather than to increase fishing capacity. Abolishing fishery subsidies in Ireland is, therefore, not likely to have huge effects on the fishing fleet, while the effects on rural communities could be grave. For politicians ever to consider the removal of subsidies, alternative policies must be developed to assist people that live in disadvantaged regions.

Keywords: fishery subsidies, fishery management, rural development, Ireland

JEL Classification: Q22, Q28, R23, H20

1 Introduction

Subsidies in the world's fishing industry have long been considered to have harmful effects on fish stocks. Subsidies encourage investment in an industry that for many years has suffered from overcapacity, creating even more capacity. This excessive capacity increases pressures on fish stocks, many of which are already exploited close to extinction. An interesting question to consider is why these subsidies exist, since the overcapacity is apparent to anyone that cares to take a close look at the fishing industries of the world.

One possible reason for the perseverance of fisheries subsidies comes from the common property nature of fish resources. Until quite recently, almost all of the world's fish stocks were in no-man's land where they could be exploited by any country that wished to do so. It is possible to envisage a vicious game theoretical cycle, where each nation encourages investment in their own fishing industry, in order not to lose their relative share of fish catches to other countries who subsidise their fishing fleets. Subsidies in one country lead to subsidies in another country, which again leads to more subsidies in the first country etc. It is not difficult to model this type of behaviour in a prisoner's dilemma environment. For instance, in international trade theory, textbook material looks at situations of this type regarding export subsidies (e.g., Kenen, 1989).

With regard to fisheries, the argument is basically a capital stuffing story. However, whereas capital stuffing is normally considered at a micro level where individual fishermen compete against each other, here it occurs at a macro level where governments are competing. This capital stuffing argument agrees well with discussions frequently seen in the popular press, regarding distant water fleets, and also from many environmental groups, where subsidies are seen as one of the main sources of overexploitation of fish stocks. However, the question needs to be asked whether all subsidies given to the fishing industry have this effect on capacity.

In this paper, evidence from Ireland is used to draw a different picture of subsidies. It argues that subsidies — at least in Ireland — have changed considerably during the last decade and a half, leading to a system of subsidies that, perhaps, is not putting as much pressure on the fish resource as often claimed. The analysis suggests that subsidies in Ireland are used increasingly for the purpose of employment creation in disadvantaged regions, rather than to increase fishing capacity. The fundamental objective is to prevent outmigration of people from peripheral regions of the State. Therefore, any suggestions to remove these subsidies must take this into account, and propose alternatives for employment creation.

The next section of the paper introduces a simple model showing how subsidies to the fishing sector can be used as a regional policy tool to reduce outmigration. The third section describes briefly subsidies in Irish fisheries, and finally discussion and conclusions are presented.

2 Subsidies and regional policy

Subsidies to industries may exist for various reasons. In the fishing industry they could be put in place, for instance, to increase harvest, to make the domestic industry more competitive internationally, to generate or increase claims to non-quota species, or to increase employment. It is also conceivable that subsidies are a tool of a politician who wants to be re-elected to Parliament; the more subsidies he secures for his constituency, the more likely he is to be re-elected. In Ireland, it seems that one of the main reasons for subsidies arises from regional disparities. In spite of the Celtic tiger, many regions of Ireland are still very poor and underdeveloped. For some time there has been a growing concern regarding outmigration of people from rural areas to the larger cities of the State (e.g., Cawley, 1996).

A number of factors may contribute to such outmigration. One possible scenario is illustrated in Figure 1. Two labour markets are shown there, one for a small town in a peripheral area, the other for a large, bustling city in the same country. The initial labour demand is given by D_S^0 for the small town, and D_B^0 for the big city. The supply of labour is S_S^0 and S_B^0 for the small town and the big city, respectively.

The main difference to keep in mind between the two markets is that in the small town, only a few hundred people live, whereas in the big city hundreds of thousands of people live and work. Therefore, the big city's labour market determines the equilibrium wage rate, w^* . If the small town's wage rate deviates from w^* , migration of labour will bring the wage back in line with the one in the big city.

For an unspecified reason, some companies in the small town have decided to relocate elsewhere. Consequently, the demand for labour shifts to the left, and becomes D_S^1 . This places downward pressure on wages in the small town; either the wage falls to w^1 with a reduction in the labour force to L_S^1 , or, if the wage rate is sticky, unemployment of $L_S^0 - L_S^1$ results. Either way, the big city will look attractive to some people now, and migration of labour from the small town occurs. The labour market in the big city will not be affected at all, since it is so large in relative terms. However, in the small town, the labour supply curve shifts to the left, clearing the labour market

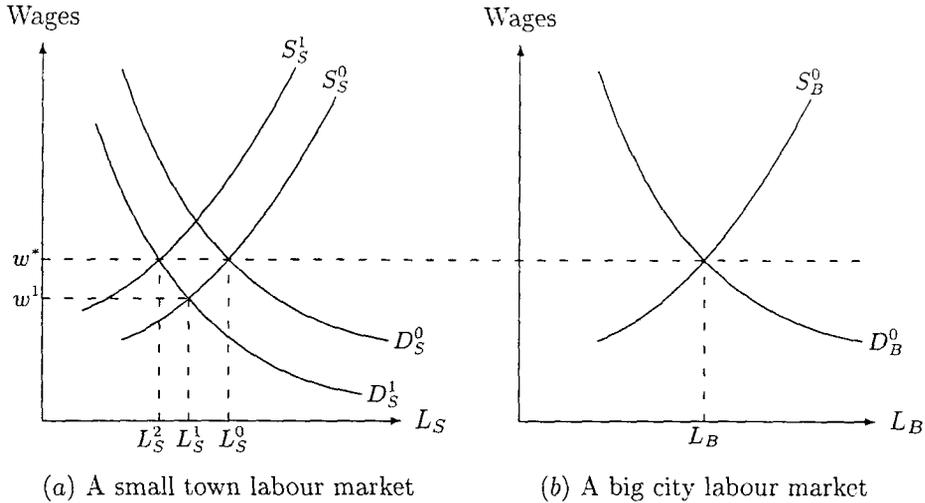


Figure 1: Small regions and subsidies

at w^* , but leading to fewer people living in the town.

Many will consider a situation such as the one just described as unacceptable, and argue that outmigration from peripheral areas needs to be prevented. One way of achieving this is to subsidise industries that are willing to locate in the small town. A subsidy, that is successful in luring firms to the small town, will maintain the demand for labour at D_S^0 and people will not move away from the town, thus the supply of labour will stay at S_S^0 as well.¹ An argument could even be made for greater subsidies, shifting labour demand even further out, leading to migration of people to the small town.

Ireland has some schemes of this kind in place to fight the outmigration of people from peripheral regions. For instance, particular problems of outmigration have arisen in Irish speaking areas of the country (the *Gaeltacht* areas). The Irish government has introduced various development policies to reduce the historical population decline in these areas (e.g., Keane, Griffith, and Dunn, 1993) including special subsidies for firms willing to locate in *Gaeltacht* regions. However, the success of these policies is hard to determine.

The fishing industry is considered an industry worth subsidising for this purpose. Much of the fishing activities in Ireland take place off the the west coast of Ireland (including the north-west and south-west). In many areas,

¹Armstrong and Taylor (1985) discuss, in detail, subsidies used for regional purposes, both capital and labour subsidies.

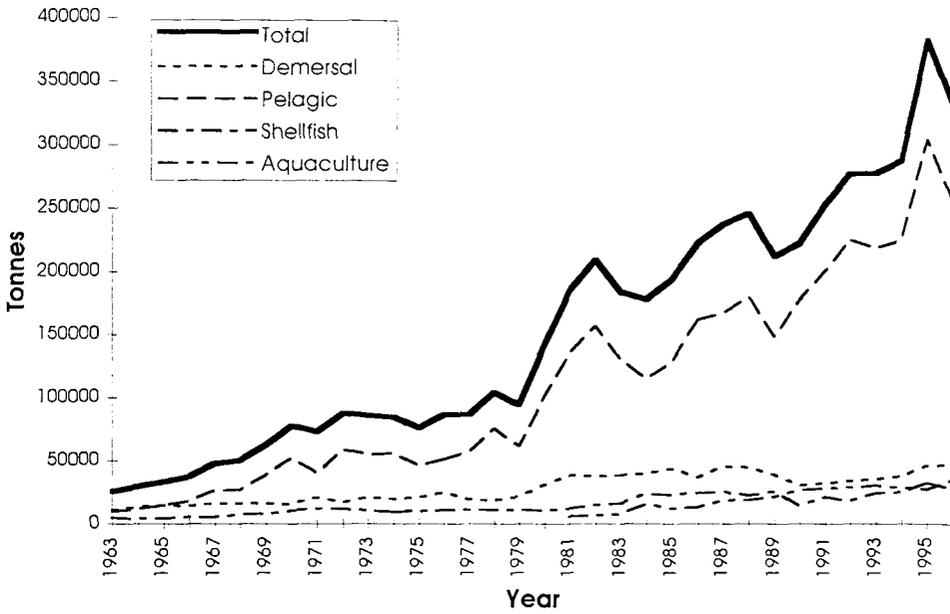
in this part of the country, the fishing industry is the only employer worth mentioning. Very few alternative industries exist and, therefore, the fishing industry becomes the employer of last resort.

The following discussion analyses subsidies in the Irish fisheries sector in order to determine whether they seem to be used for regional purposes, as described above, or for some other purposes. As has been said, if subsidies are to be removed, it is of utmost importance to understand what underlying motives brought them about in the first place. Only then can policies be recommended that can replace the subsidies, if their removal is deemed desirable.

3 Fisheries subsidies in Ireland

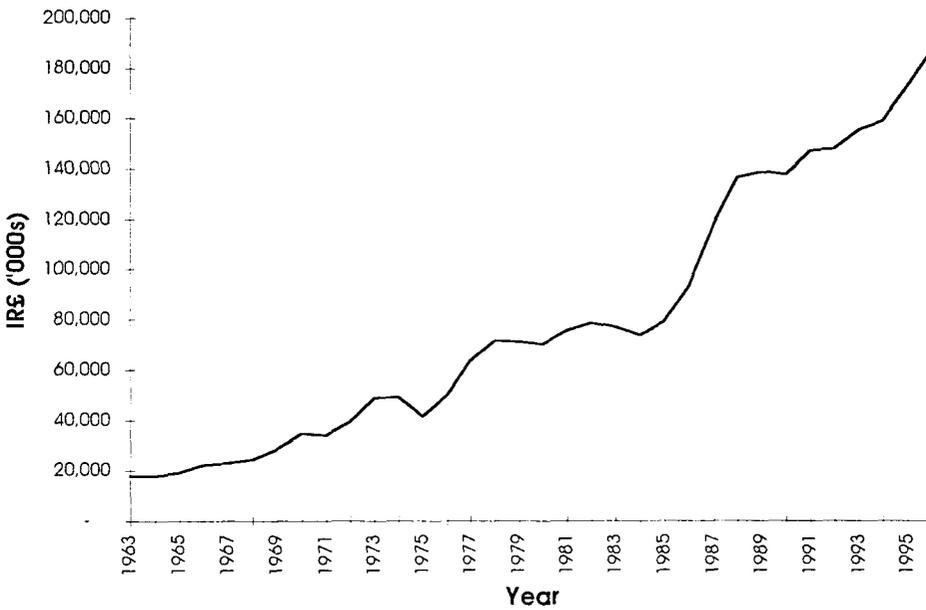
Since the beginning of the 1960s, a subsidy system has been in place for the fishing industry in Ireland. In the late 1950s, there seems to have been interest at national government level to develop the Irish fishing fleet. A number of reports were commissioned with the aim to develop a future strategy for the fishing industry in Ireland (McGinley, 1991). However, no significant actions followed these reports, except that a grant system was established. These boat grants, as they were called, consisted of two components; an actual grant, and a loan with favourable interest rates. It is noteworthy, that the word *subsidy* is never used in official documentation, but rather the word *grant* is employed. No doubt that a grant is a nobler concept than a subsidy. The grants were under the control of *Bord Iascaigh Mhara* (BIM), the Irish Sea Fisheries Board. At this time, the Irish fishing fleet was underdeveloped — some say it still is — and the opportunity to build a sizable fleet clearly existed. Since then, the fishing fleet has grown considerably and landings have increased dramatically as can be seen in Figure 2. There has been a steady increase in landings, in the occasional year a drop has occurred, but the trend is definitely upwards. Pelagic catches are the main component of the catch, but, even if it does not show well in Figure 2, demersal catches have more than quadrupled, from 10,688 tonnes in 1963 to 46,901 tonnes in 1996. The value of landings, shown in Figure 3, has followed a similar pattern as catches.

In these early days, the grant system was quite simple. There were grants given to purchase new vessels, and also for maintenance and modernisation of existing vessels. Boat yards and ice plants were also supported and, occasionally, a fish processing plant would be grant aided as well. Finally, interest subvention was a considerable part of the subsidy system until 1987, when this subvention ceased.



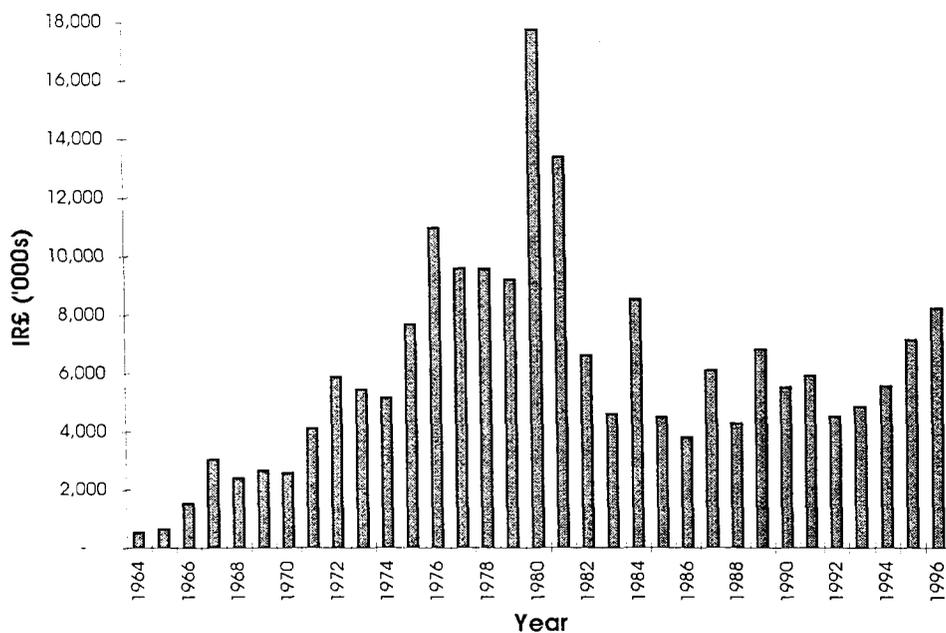
Source: BIM (various years); CSO (1997)

Figure 2: Total landings of fish in Ireland, 1963–1996



Source: BIM (various years); CSO (1997)

Figure 3: Value of landings of fish in Ireland, 1963–1996 (constant 1996 values)



Source: BIM (various years)

Figure 4: Total fisheries subsidies in Ireland, 1964–1996 (constant 1996 values)

Since these early days, much has changed. Today, the system of subsidies has become much more complicated, as many different activities now qualify. There still is the grant to buy new vessels, and to upgrade old ones. True, it is more difficult to receive grant approval now, because of capacity restrictions, but the grant is still there. In addition, aquaculture ventures can get grants to develop new and improved facilities. There are specific grants to improve the handling of fish, aimed primarily at the aquaculture sector. Processing firms can get grants to upgrade their plants, and under the recent PESCA plan, grants are available for employment creating investments in fishing communities. PESCA is a European Union (EU) initiative aimed at helping the fishing industry overcome difficulties caused by factors such as fleet reductions, market instability, and the enlargement of the EU. It focuses particularly on regions which are dependent on fisheries to support their local economies and aims to contribute to their socio-economic survival through employment creating measures. Finally, in 1996, a decommissioning programme was implemented where the government buys fishermen out of the industry. This programme aims to meet fleet reduction targets set by the EU. To complicate matters even more, most of these grants are both on the State level and on the EU level.

Figure 4 shows total yearly grants payments to the Irish fishing industry

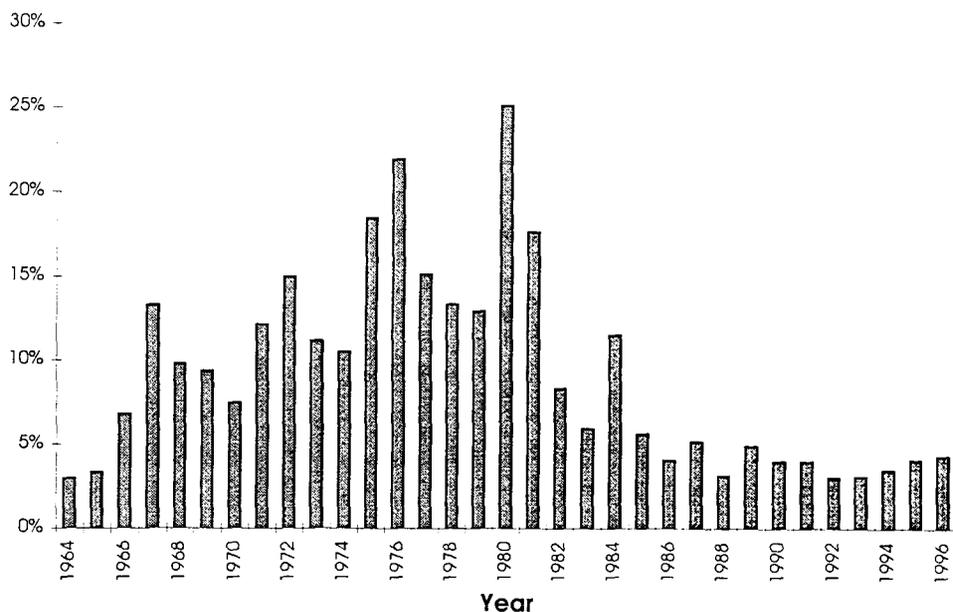


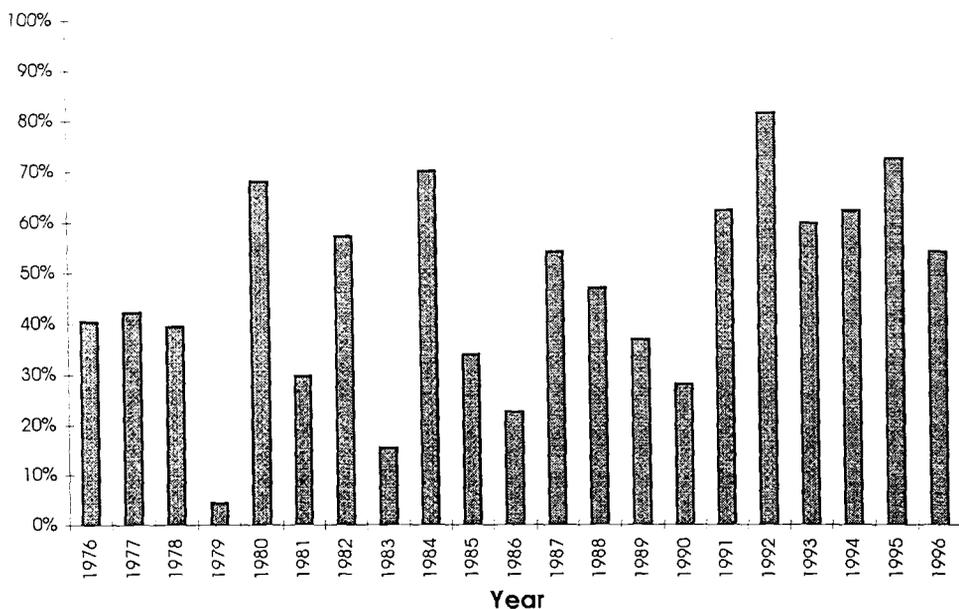
Figure 5: Total subsidies as a percentage of the value of total landings, 1964–1996

from 1964–1996.² The payments are measured in Irish pounds, and in order to compare payments among years, they are all shown in 1996 values, using the consumer price index (November 1996 = 100) for conversion purposes.

From Figure 4, one can see that the grant system began at a rather moderate level, but increased steadily until 1980 when it fell sharply. Since 1982, grant payments were rather stable, but from 1992–1996 they have increased every year. The mean annual payment over the whole period is at just over IR£5.8 million.

It is important to set subsidy payments into perspective. For example, does the total subsidy payment of just over IR£8 million in 1996 constitute a high or a low subsidy? One way to measure this is to express subsidies as a percentage of the value of total landings. Figure 5 shows this percentage from 1964 to 1996. After a clearly upward trend until 1980, where subsidies reached 25% of the value of landings, the number has dropped significantly to about 3–5%. This does not represent a large portion of the value of landings. In fact, the question could be raised whether the industry needs this assistance from the government. However, interesting as it may be, this question will not be addressed in this paper.

²The data is quite comprehensive, except that payments for fish withdrawals are not included. These are payments made to fishermen when market prices, for certain species, fall below guideline prices set by the EU.



Source: BIM (various years)

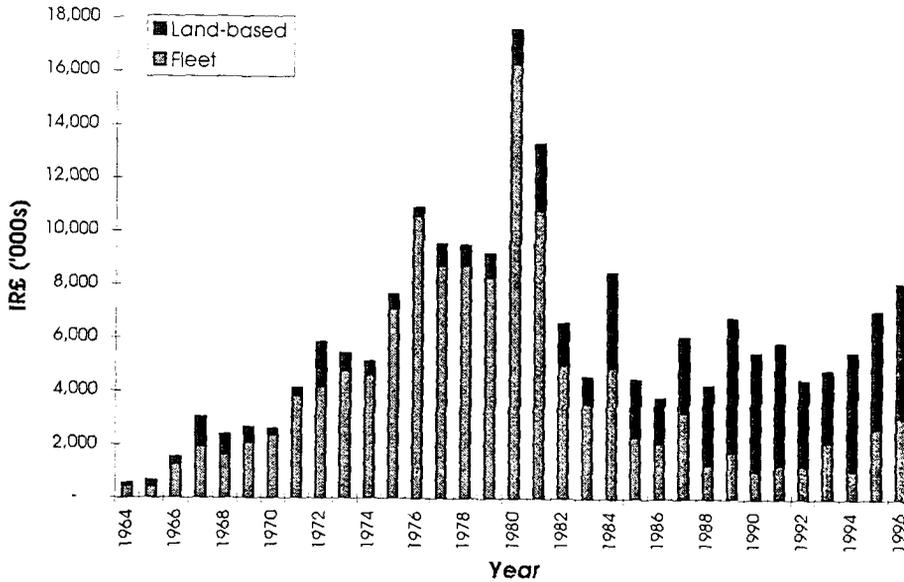
Figure 6: EU grants as a percentage of total grants, 1976–1996

When Ireland joined the EU in 1973, Irish fishermen became eligible for EU grant aid in addition to grants from the State. Figure 6 shows EU grant payments as a percentage of total grant payments to the Irish fishing industry from 1976–1996. Until 1990, there were considerable fluctuations, with the percentage ranging from a low of 4% in 1979, to a high of 70% in 1984. The mean for this period is 39%. In 1991, EU’s share in total grants increased considerably from the previous years, and has never fallen below 54% since then. The mean for the period 1991–1996 is 62%. In fact, the hypothesis that the mean for the latter period is higher than for the first period cannot be statistically rejected³. This indicates increasing dependance on European payments for the fishing industry.

3.1 Fleet investment vs. land-based investment

Figure 7 shows the division between grants for fleet investment and grants for land-based investment from 1964 to 1996. Fleet investment, as defined here, consists of grants for vessel building and upgrading, interest subvention, and decommissioning. Grants for land-based investment are considered to be grants for boat-yards, aquaculture, investment grants for processing, and

³ $H_0: \mu_{76-90} - \mu_{91-96} = 0$ with $H_1: \mu_{76-90} - \mu_{91-96} < 0$. The t value, with 5 degrees of freedom is -4.18 , which rejects H_0 at any reasonable level of significance.



Source: BIM (various years)

Figure 7: Subsidies for fleet investment and for land-based investment, 1964–1996 (constant 1996 values)

PESCA payments. Initially, and for the better part of this period, the fleet received more grants than land-based activities. However, in the 1980s this began to change, in particular, due to increases in aquaculture. Figure 8 shows the percentage of grants to land-based industries as a percentage of total grant payments. After receiving a very low portion of total grants in the 1970s, an immense increase occurs in the relative share of total grants for land-based activities, both in the 1980s, and, also, the 1990s. From 1964 to 1980, the land-based industry received on average 15% of total grant payments to the fishing industry, while from 1981 to 1996 its share was 56% on average. This difference is considerable and statistically significant⁴. It is, therefore, clear that a considerable shift in emphasis of the grant system has occurred over the time period in question.

4 Discussion and conclusions

The previous section looked at some historical facts of subsidies to the Irish fishing industry since 1964. It is evident that the beneficiaries of this system have changed during this time period. For the first half of it, vessel owners

⁴ $H_0: \mu_{64-80} - \mu_{81-96} = 0$ with $H_1: \mu_{64-80} - \mu_{81-96} < 0$. The t value, with 15 degrees of freedom is -6.77 , which rejects H_0 at any reasonable level of significance.

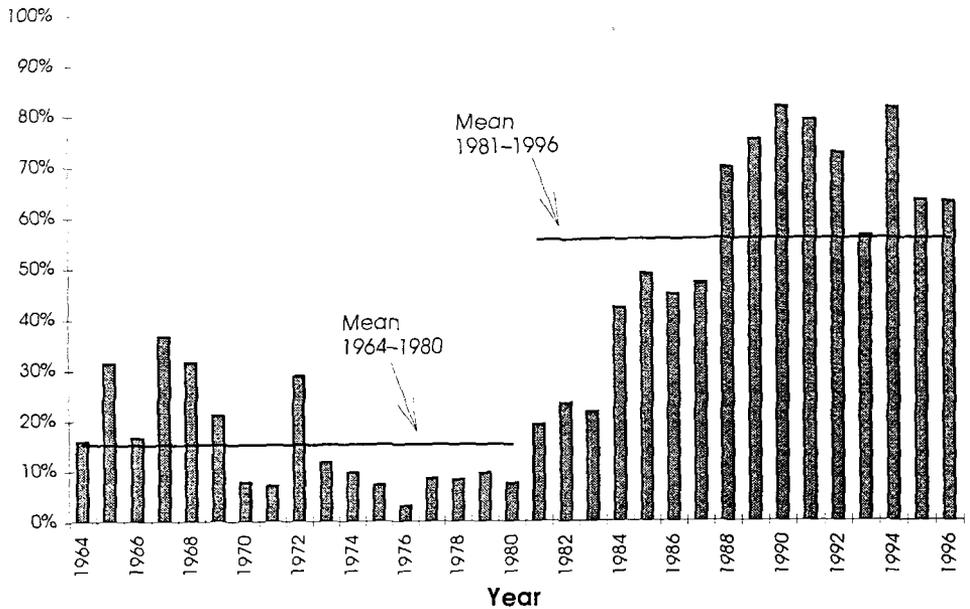


Figure 8: Subsidies to land-based industries as a percentage of total, 1964–1996

were the main recipients of fisheries grants. This suggests that the emphasis in the beginning was production based, and the main objective was to increase landings of fish. The early 1980s show a change in the focus of the grant system. Vessel owners begin to receive proportionately less, with aquaculture being the main beneficiary of this change. It is interesting to read annual reports of the BIM and follow the discussion during the 1980s and 1990s. Even if aquaculture is seen as an industry that will increase the production of fish, relieving pressures on wild stocks, the main benefits perceived to arise from it is the employment that it gives. Most aquaculture sites in Ireland are in regions that are classified as disadvantaged. It is clear, that Irish policy makers have considered aquaculture as a very feasible option to increase employment. Along with tourism, it has probably been seen as the industry that could stop the outmigration of people from various areas on the west coast of Ireland. From the late 1980s until the present, aquaculture received around one-half of total fisheries grants every year.

The analysis in the paper suggests that subsidies in Irish fisheries are not contributing significantly to overcapacity of the fishing fleet. Total subsidies as a percentage of the value of total landings has been rather low for the last decade and a half (Figure 5). If it is taken into consideration that subsidies to the fishing fleet have been less than half of total subsidies for this period, it reduces the role subsidies have in generating fishing capacity even further.

Abolishing fisheries subsidies in Ireland is, therefore, not likely to have huge effects on the fishing fleet. However, the effects on rural communities could be grave. It seems that the main objectives now with the system of fisheries subsidies is not to increase capacity, but to support employment in fishing regions in the way described with the model in Section 2. If, in fact, this is the case, then, if fisheries subsidies are to be removed, it is imperative that alternative policies be developed to assist the people that live in these disadvantaged regions. Without such alternative policies, politicians are unlikely to even consider recommendations that entail the removal of subsidies to the fishing industry.

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