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# A Socio-Economic Analysis of the Inshore

## Fishing Industry in West Clare

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### **SEMRU** Working Paper Series

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### Abstract

Fishing, particularly inshore fishing is perceived to be of great economic and cultural benefit to coastal regions in Ireland and the EU in general. However, the lack of detailed socio-economic information on the inshore fishing industry has hindered the ability of policy-makers and stakeholders to clearly evaluate the benefit of this activity to coastal communities. This paper aims to provide a socio-economic profile of inshore fishers in the West of Ireland (County Clare). The paper examines the five Electoral Divisions (EDs) in West Clare with the highest rate of fishing activity. The analysis is based on secondary data from the Small Area Population Statistics (SAPS) and primary data collected via a survey of the fishers based in West Clare. This paper provides the first socio-economic analysis of fishing in the region and highlights some of the issues which exist for inshore fishers and their livelihoods.

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#### **1. Introduction**

Ireland has an extensive continental shelf within its 200 mile economic zone and contributes significantly to the EU common fisheries resources (O'Donnchadha et al., 2000). Irish access to these fisheries, as specified by the Common Fisheries Policy (CFP) is highlighted as a serious disadvantage to the Irish seafood sector (Cawley et al., 2006) and the coastal community as a whole (O'Donnchadha et al., 2000). At the national level, the Cawley Report (2006) points to the imbalance between the catching capacity of the Irish fleet and the availability of resources - due to declining fish stocks, reduced quotas and the requirement for strict regulatory compliance. This has resulted in a quota allocation for Irish Fishers which is not economically viable for large sections of the whitefish and pelagic fleet to operate in (Cawley, 2006). Further knock on industry level effects are clearly evident in the seafood processing industry, which has contracted significantly over the last decade (Cawley, 2006). The seafood industry as a whole (including sea fisheries (€251m), aquaculture (€105.7m) and processing (379.5m)) was worth €736 million in 2007.

Turning to the community level, fishing and their ancillary industries are commonly perceived to be of significant social and economic benefit to coastal economies (Meredith, 1999). In terms of economic impact at the community level, similar to the national level, fishing activity generates both direct and indirect employment and income. However, in terms of socio-cultural impacts, Macken-Walsh, (2009) points to the prestige felt by fishers in their fishing practices and how they managed to effectively interact with their local fishing grounds. With regard to the sense of identity fishers place in their work, Duggan (2004) notes (in her research conducted in Carna, Co. Galway), that while farming is "absent from the local conceptual framework of occupations within the area", fishing represents a "distinct and coherent collective occupational identity" (p. 10). Thus, a sense of identity from their occupation is derived not just in the fishers themselves, but for the community as a whole.

#### A Profile of Inshore Fishing in Ireland

There were 2098 fishing boats registered in February 2010, of which over 90% are skipper/owner single vessel family operations. These boats land fish and shellfish at

approximately 125 destinations along the Irish coastline. Of these 125 destinations there are:

- 5 major fishery harbour centres (Killybegs, Castletownbere, Howth, Rossaveal and Dunmore East),
- 40 secondary ports with landings over €1 million annually and
- 80 piers and landing areas where fish landings are recorded.

In the last 3 years the industry has seen an increase in the number of vessels but a decline in the accumulative power of all the industry boats. This decline is in line with EU policy and is seen as a means of combating over-fishing. Fishing activities may be defined into two broad categories: inshore fishing and offshore fishing. Although the inshore fishing sector accounts for 82% of all EU vessels and 80% of all Irish vessels, there has been little economic research in Ireland or within the EU on this sector, with most research centring on the more profitable pelagic and offshore whitefish industry. Thus, the precise composition of the Irish inshore fleet, which is concentrated on the fishing of shellfish such as lobster, crab, and scallops, is difficult to gauge. Indeed, a clear indication of the laissez-faire attitude of policy-makers to inshore fishing is apparent given that the definition of an inshore fishing vessel varies throughout the EU. Within Ireland, a vessel qualifies as an inshore vessel if it exploits waters inside 12 nautical miles of the coast and if the boat is less than 15m in overall length (OAL) (Fahy et al, 2007). Carrying out a survey of smaller boats working in waters close to shore Tully (2002) found that 61% of the vessels whose status was known, were not on the vessel register. Furthermore, registration of vessels varied on a regional basis. The highest percentage of unregistered boats (86%) occurred in Co. Donegal, while the greatest compliance was in Co. Wexford where 67% of vessels, associated with the South Wexford Lobster Cooperative, were listed. However, Tully (2002) concluded that a large proportion of boats on the register no longer fished, but their owners retained the licences and therefore, that the number of licences was not necessarily an indicator of fishing activity.

One study by Fahy et al., (2007) does try to address the issue of inshore fishing activity. This study was conducted for the three ports with the largest inshore fishing

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activity in Ireland, the ports of Galway, Cork and Waterford (who combined had 49% of inshore fishing activity). Fahy et al., (2007) observed daily "absence-from-port" patterns for 147 vessels ranging from 5 to 13 m overall length, between April 2006 and March 2007 at the three ports. The vessels numbered approximately 6% of the total national fleet. Their study found that activity (absence) patterns were low, ranging between 14% and 42% of week-days on which observations were made. Furthermore only one port, Cork had a typical inshore fishing pattern: one in which activity is greatest during the summer months when weather conditions are most favourable for smaller vessels.

However, regardless of activity levels, inshore fisheries represent an important component of the fishing industry in Ireland, least of all because of the number of boats within this sub-sector. This paper specifically examines the fisheries sector in the western region of Co. Clare. Issues addressed through a primary data collection process include a demographic and socio-economic profile of the inshore fishers in West Clare. Further questions address the fisher's views on decommissioning and the potential for the fisheries sector in West Clare in the long term.

#### 2. Data

This paper seeks to establish the main characteristics of the fishing industry in Clare, the main problems facing the industry at the moment and perceived trends in fishing characteristics. The data required for such an analysis was obtained using secondary data, from the Small Area Population Statistics (SAPS), and the collection of primary data by conducting a survey of fishers in the Clare fishing communities.

#### Secondary Data

Using the SAPS dataset, the primary fishing areas in Clare comprise the EDs of Rahona, Kilmurry, Doonbeg, Killilagh and Liscannor in Co. Clare. EDs are the smallest geographical statistical unit for which population data is released. EDs range in size in terms of population and geographical area. The SAPS data is collected and disaggregated down to the small area level from the Census of Population conducted by the CSO. The census data refers to the *de facto* (i.e. population present in the district on the day of the census) population of the area. The availability of a wide number of geographically referenced socio-economic variables within SAPS makes

this data very applicable to the study. For the purpose of this paper, the population, employment, occupation and education variables are of primary interest. The years included within this analysis are 1981, 1986, 1991, 1996, 2002 and 2006. Unfortunately not every variable was available for every year of the census.

#### Primary Data

In terms of primary data collection, the fisher's survey had a number of components. These components comprised of questions on household structure, vessel type, expenditure patterns, staff details, fishing history and income derived from fishing. Each respondent was selected based on the availability of their contact information. The majority of the contact information was obtained from the chair of the lobster advisory group for Clare. However, other details were found through personal contacts. Once the respondents were contacted, they had to satisfy certain criteria. The criteria for the survey included:

- 1. The fisher was a boat owner
- 2. The fisher had been actively fishing in Clare
- 3. The fisher was resident in one of the following 5 EDs, Rahona, Kilmurry, Doonbeg, Killilagh and Liscannor

The interview process was conducted between the 13<sup>th</sup> July and the 30<sup>th</sup> of July, 2009. The interviews were conducted over the phone; as the rural nature of Clare and the unpredictable fishing hours made face to face interviews infeasible. Each interview consisted of an interviewer asking the respondent the questions from the survey and finished with a short conversation with the respondents about the industry. The response burden for each interview was between 12 to 15 minutes.

The survey design was informed from three different sources. The first was a questionnaire from a study conducted by O'Donnchadha et al., (2000), on behalf of the Marine Institute, which examined the socio-economics of Fisheries in Counties Cork, Donegal, Kerry and Galway. This questionnaire helped to frame some of the expenditure and employee questions. The second source was a survey conducted by McGinley (1991), which focused on fishing industry in Donegal. The vessel subsection of this questionnaire was particularly useful. For the household section of the

questionnaire, the 2006 census questionnaire from the CSO was drawn upon to form a set of questions that would be relevant to the survey (CSO, 2008).

In terms of data collection, a number of difficulties did arise. The first was in conducting a pilot survey. Due to the difficulty in contacting fishers in the area; the pilot survey was deemed to be too time consuming. If it had been possible to conduct a pilot survey the questionnaire could have been more specific. For example, although the survey included a question on decommissioning, as boats less than 15m are not eligible for this scheme, the fishers did not have much knowledge of the decommissioning scheme. As such, a number of questions were not applicable and therefore the section did not generate much useful information. However, it may also be possible that this study can now act as a pilot survey for any further research into the inshore fishing sector. Secondly, the lack of contact details on the fishing register made contacting the respondents very time consuming.

#### 3. West Clare an Overview

Using the SAPS dataset, the primary fishing areas in Clare comprise of the EDs of Rahona, Kilmurry, Doonbeg, Killilagh and Liscannor. From Table one, we can see that Killilagh ED has the largest population in 2006 (815) and Liscannor the smallest (282). The total population of the five EDs was 2903 in 2006. In terms of economic activity, traditional agriculture and fishing activities still dominate in West Clare. The 2000 Census of Agriculture records that 452 persons were employed in agriculture, forestry and fishing in these five EDs in 2000. This represented a total of 297 Annual Work Units (AWU, calculated as 1800 hours of work per person per annum) across the following categories; House holder, spouse, other family workers and other non-family workers. These EDs represent 4% of the total number of people employed in agriculture, forestry and fishing and 4% of the AWU expended in Clare in 2000.

Year	ED Name	Total	Male	Female
2006	Killilagh	815	404	411
2006	Liscannor	282	141	141
2006	Doonbeg	701	375	326
2006	Kilmurry	726	373	353
2006	Rahona	379	194	185
2006	Total	2903	1487	1416

 Table 1 Population of each ED of Interest in 2006

With regard to employment, the 2006 SAPS records that within the five EDs 1,324 individuals over the age of fifteen are employed, 97 are unemployed and 948 are not in the labour force. This represents a 4% unemployment rate across the five EDs, with Rahona ED having the highest rate of unemployment at 6%. With regard to occupation, the 2006 SAPS data indicates that 162 individuals were employed in 'Agriculture, Fishery and Forestry'. This represents 12% of the total labour force in these five EDs. With regards to other categories of occupation, 208 individuals were employed in Building and Construction (16%); 112 were involved in Manufacturing (8%); 217 in Commerce (17%); 52 in Transport (3%); 184 in Professional Services (14%) and 389 in 'Other' occupations (29%).

A Deprivation and Affluence Index has been developed by Haase and Pratschke for Ireland. This index assigns a score in relation to: demographic change, social class composition and labour market composition (Haase and Pratschke, 2008). The Absolute Index Scores measure the actual affluence/deprivation of each area on a single fixed scale which, for 1991, has a mean of zero and standard deviation of ten. As the economy has greatly improved over the past fifteen years, the Absolute Index Scores for most EDs have increased significantly. Since affluence/deprivation is measured on a fixed scale, it is possible to use the Absolute Index Scores to evaluate this progress across successive waves of data. Using the data from the 1991, 1996, 2002 and 2006 SAPS, the Absolute Deprivation Index (ADI) scores can be calculated for the five EDs of interest.

ED_NAME	1991 - ADI	1996 - ADI	2002 - ADI	2006 - ADI
Rahona	.5	-8.0	1.0	3.2
Kilmurry	-13.1	-5.3	4.8	6.8
Doonbeg	-5.3	-7.9	.8	7.7
Killilagh	-3.1	2.9	13.7	14.3
Liscannor	2.7	3.7	12.8	9.8

 Table 2 Absolute Deprivation Index for West Clare

From Table 2 one can see that the ED Rahona has the lowest ADI score – that is it has a high rate of absolute deprivation across time. Indeed, looking at the complete ADI scores for Co. Clare, Rahona has the sixteenth lowest ADI score out of one hundred and fifty one EDs. However, if we are interested in targeting resources towards disadvantaged areas, the relative position of each area at a specific point in time is of greater importance. This is represented by the Relative Index Score (RIS), which has been rescaled so as to have a mean of zero and standard deviation of ten *at each census wave*. The RIS shows the position of any given ED relative to all other EDs in 2006. Using the RIS, one can see that Rahona has a very low RIS score, indicating high levels of relative deprivation compared to other EDs in Ireland. Using the RIS score, it is also found that Kilmurry and Doonbeg, also have high levels of relative deprivation.

ED_NAME	RIS - 91	<b>RIS 96</b>	RIS - 02	<b>RIS - 06</b>
Rahona	.5	-10.8	-9.0	-7.8
Kilmurry	-13.1	-8.0	-4.3	-2.8
Doonbeg	-5.3	-10.6	-9.2	-1.7
Killilagh	-3.1	.6	6.9	7.6
Liscannor	2.7	1.4	5.8	1.3

**Table 3 Relative Deprivation Index for West Clare** 

Table 4 presents a number of socio-economic indictors for the five EDs of interest, including population change for the period 2002 to 2006 and the period 1991 to 2006, unemployment Levels in 2006 and the percentage of individuals with a higher education in 2006. In terms of population change, Killilagh accounted for the

majority of the increase in population of the selected districts, with a 40% increase in population between 1991 and 2006. Both Doonbeg (8%) and Rahona (10%) also experienced population increase. In contrast, Liscannor experienced a decline in population of 6% during the same time period, while Kilmurry remained the same. With regard to unemployment, one can see that both Killilagh and Rahona have the highest rate of employment at 4%. This rate is just slightly lower than the national average of 4.3% in 2006. In contrast, the other three EDs have unemployment rates well below the national average for this time.

ED	2006	2002	Change in	Change in	Unemploy	% 3 <sup>rd</sup> Level
			Population	Population	Rate	Education
			2002-2006	1991-2006		
Killilagh	815	731	0.11	0.40	0.04	0.27
Liscannor	282	352	-0.20	-0.06	0.01	0.17
Doonbeg	701	596	0.18	0.08	0.02	0.17
Kilmurry	726	739	-0.02	0.00	0.03	0.12
Rahona	379	396	-0.04	0.10	0.04	0.12

**Table 4 Population Change, Unemployment Levels and Education** 

In terms of education, one can see that 27% of the residents of Killilagh have a third level qualification. This percentage is much higher than the other four EDs, with Liscannor and Doonbeg reporting 17% and Kilmurry and Rahona 12%. In terms of occupation type, Table 5 shows the change in individuals in each occupation between 2002 and 2006. As one can see, there was a 23% decline in the number of individuals involved in the Agriculture, Fishing and Forestry occupations, while a decline was also recorded in the manufacturing (6%) and Transport and Communications sector (6%). In contrast, both the Building and Construction sector grew by 35% in these five EDs, as did those involved in professional service (36%) and commerce and trade (18%).

	AFF <sup>1</sup>	$B\&C^2$	Manu <sup>3</sup>	C&T <sup>4</sup>	T&C <sup>5</sup>	Prof <sup>6</sup>	Other <sup>7</sup>
Killilagh	-0.12	0.39	0.15	0.37	0.20	0.58	0.10
Liscannor	-0.85	0.36	0.00	-0.28	-1.50	0.11	-0.05
Doonbeg	-0.25	0.27	-0.28	0.40	-0.50	0.30	0.64
Kilmurry	-0.13	0.31	-0.10	-0.05	-0.27	0.33	0.31
Rahona	-0.20	0.55	0.13	-0.50	0.33	-0.20	0.05
Total	-0.23	0.35	-0.06	0.18	-0.06	0.36	0.26

Table 5 Occupation Change between 2002 and 2006 in West Clare

1. Agriculture, forestry & fishing, 2. Building & construction, 3. Manufacturing industries, 4. Commerce & trade, 5. Transport & communications, 6. Professional Services

The trends in occupation type are indicative of a number of factors, primarily the housing boom that marked the Celtic tiger, particularly between 2003 and 2007. But, the growth in individuals employed in professional services represents the growth in third level education throughout the 1990s and the 2000s. These had direct and indirect displacement effects on other occupation sectors, particularly highlighted by the large decline in natural resource based occupation between 2002 and 2006. From this data, and from comments made by fishers during the survey on the decline in fishing activity in West Clare, one may assume that the proportion of individuals involved in fishing within the broader Agriculture, Fishing and Forestry sector has also declined in West Clare. The next section presents the results of a survey of nineteen fishers in West Clare during the summer of 2009. The survey will address for the fishing industry alone some of the analysis provided above. Further questions also examine vessel details, fishing history, the major expenditures of the fishers and fishing income.

#### 4. Fishing in West Clare

#### Size of Sector, Income and Profitability

The fishing industry in Clare is predominantly dominated by lobster and crab fishing. As the stocks of these fish are relatively high, there is no quota system in place to limit catch size. Indeed, in contrast to many fish stocks, stocks of lobster are increasing. This ensures that the fishers in West Clare do not have to face the

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common problem within the industry of declining fish stocks. The total population of Fishers in Clare according to the Fishing Boat Licence register is thirty-three. Of these thirty-three, nineteen fishers could be contacted, this represented twelve boats in the area. The fishing boats in Clare account for 1.6% of the boats on the Irish register (Department of Agriculture, Fisheries and Food, 2009). Although the sample is small, it includes at least one respondent from each of the ports, where boats are moored according to the Licence Register.

All of the boats within this sample were less than 13 meters, with an average length of 9.75 metres. The average age of each boat was 21 years; the oldest was 39 years and the newest, one year. The number of weeks that these boats fished during the year ranged from 8 weeks to 12, with 12 weeks being the average. Fifty eight percent of the boats had between 0 and 10 GRT and 33% had between 11 and 50 GRT. The boats are at sea, normally, from March to November but some fishers reported that they fish for a number of weeks in December and February, weather permitting. The average age of the vessels sampled is 21 years old, which is just one year less than the national average for registered boats (Marine Work Group Ireland, 2007).

Of the twelve boats, six boats were manned by two individuals (the boat owner and a skipper), while the other six were manned solely by the skipper. Of the boats that were manned with more than one individual, four of these employees were part-time. The extent to which these individuals were employed on a part-time basis varied between eight and twenty-five hours. Only two boats employed another individual on a fulltime basis. Within this sample all fishers are male. The average age of the crew (including boat owners) was forty-nine years old. The youngest individual was twenty-two, while the eldest was sixty years old.

Of the twelve boats, seven skippers had a full-time or part-time job outside of fishing in the previous five years. However, of these seven, only one boat owner stated that fishing was not there primary source of income. In terms of income, the survey asked a number of questions. These questions are outline in Table 6. The survey found that average income for fishers in West Clare was  $\notin$ 32,500. In comparison, the average yearly income for Ireland in 2008 was  $\notin$ 37,500. With regard to the fishers in West Clare, 40% of boat owners earned more than the average employee income in 2008. For fishers that were engaged in full or part work outside of fishing their non-fishing average income was  $\notin 11,500$ . 70% of the fishers with full or part time employment outside of fishing had fishing income below the average fishing income for West Clare. Thus, a small number of fishers are upwardly skewing the total income profile of fishers in West Clare.

#### **Table 6 Income Component of Survey**

1. Have you had any other full or part time work in the last 5 years outside of fishing
2. Is fishing your principal source of income?
3. What is your estimated annual income from fishing?
4. What is estimated annual income from non-fishing related activity?

In terms of the length of boat and income, fishers that engaged in full or part time work outside of fishing had an average boat size of 9.10 metres. In contrast, fishers that did not derive income from non-fishing activities had an average boat length of 10.6 metres. Indeed, the fishers in the top income quartile had an average boat length of 11 metres. Examining the income and power (kW) of the boat relationship, the survey found that in West Clare, boats have to be above the threshold of 81kW to earn an annual fishing income greater than  $\notin$ 40,000. This indicates that in West Clare boat length and the power of the boat are strong indicators of economic viability for the inshore fleet.

As with all businesses, fishers incur costs. Within the fishing industry, most boat owners have to pay fuel, insurance, maintenance, wages, bait, gear and repayment costs. The highest expenditure fishers have each year is fuel. The fuel cost for each fisher was calculated as average weekly expenditure on fuel, by the number of weeks at sea. For the twelve boats, the average fuel cost was  $\epsilon_{2,334}$ . In terms of insurance, average expenditure was  $\epsilon_{2,732}$ . Average expenditure is reported as being higher than fuel expenditure as only 75% of boats have insurance. When expenditure on insurance for 100% of the boats is taken into account, the average is  $\epsilon_{1,822}$ . With regard to boat maintenance, boat owners on average spend  $\epsilon_{6,764}$  annually. While two fishers maintain their own boats they still incur costs of over  $\epsilon_{500}$  per annum. Of the other fishers: 60% got their boat repaired in Kilrush marina and 25% brought their boats to repair companies in Limerick or Dublin. Interestingly, a further follow up question on facilities available to fishers indicated that 80% of the sample believed the number of people or companies providing boat maintenance had decreased in the last 10 years.

With regard to bait and gear, the fishers in this sample spent  $\pounds$ 5,000 a year on bait. As is typical with much of inshore fishing, the main fishing gear is pots. On average each pot costs  $\pounds$ 50. One fisher estimated that he would have to spend between  $\pounds$ 2,000 and  $\pounds$ 4,000 on gear a year depending on variable factors such as the weather damage to the gear and the deterioration of the gear. All the Boat owners agreed that fuel had increased the most in the last 10 years and maintenance and insurance had increased but not to the same extent as fuel. None of the fisherman could give an accurate answer with regard to crew wages because the wage is based on a percentage of catch. Although it was noted that the average crew wage had dropped, this was due to the price of fish dropping in the area. Furthermore, the use of ice in this sector is very limited, because the fishers return with their catch to the port each day. Only two fishers in the sample used ice and only one purchased it.

Calculating net profit (without wage data) as turnover derived from fishing activities minus costs incurred in fishing it was found that the average net profit in West Clare was  $\notin$ 13,600. Unfortunately, as there are no available statistics currently in Ireland on overall profitability in the Irish fishing fleet, this figure cannot be compared with a national or sub-national figure. However, a comparison can be drawn with agricultural income. The average income for dairy farmers in 2008 was  $\notin$ 45,732,  $\notin$ 9,593 for sheep farmers and  $\notin$ 7,739 for beef farmers. Thus, although fishing is not as profitable as dairy farming, it is more profitable than beef farming. Given that beef and sheep rather than dairy are the main farm system type in West Clare (due to soil/land quality), fishing remains on average a more viable form of income for these fishers. This is particularly relevant across other non-resource based sectors, primarily construction and manufacturing which have seen substantial employment and income decreases since the end of 2007.

#### Viability of the Inshore Fishing Sector in West Clare

Although all respondents noted that the cost of fuel had increased more than any other cost in the last 10 years, 83% of the respondents highlighted the fish prices as the biggest factor affecting their financial performance in the last year. The market for lobster, the main species fished in West Clare, has dropped considerably in price over the last 10 to 12 months. The respondents reported that in July 2008 the price for lobster was between €14 and €15 per kilo, whereas by July 2009 the price of lobster was between €9 and €9.50. This is a 33% drop in prices in one year, which the fishers attribute to the importing of lobster from Canada and France. However, it is important to note that the worldwide market for lobster is dropping as demand increases for cheaper alternatives like shrimp. In an attempt to counteract the dropping prices, 58% of the fishers in the sample have taken numerous steps to reduce their costs in the last 12 months. The methods of reducing cost varied across the sample but the main approaches adopted were; reducing the size of their engine to reduce fuel costs, self-maintaining the fishing gear and equipment, reducing the crew to the bare minimum that can operate the boat safely and simply reducing the days spent at sea.

#### Crew Details and Fishing History

As with all natural resource based sectors the demographic structure of the sector is a concern. The age structure of the sample may be a concern if the industry is to be sustained into the future, as more than half of the sample is over 50 years old and only 3 are under 40. It was further found that only 33% of the sample had "other family involvement" in the industry, including extended family and the immediate family. The survey found that there was not confidence in the long term future of the fishing industry; only 8% of respondents believe that fishing will be passed onto the next generation.

When the respondents were asked if the industry was in decline over ninety percent believed that the industry had experienced a decline over the past 20 years. But when asked about how many boats were in Clare 20 years ago they couldn't respond as they felt that the answers would be very inaccurate. However, most fishers believed the number of boats had dropped dramatically in every port in West Clare over the past 20 years. Unfortunately, the register of boat licences by port only provides information on the current fleet. As such, a time trend analysis of fishing activity in West Clare was not possible.

#### 5. Conclusions

One of the primary aims the CFP is to ensure an equitable living standard for all those involved in the fishing industry. This survey found that the average income for the West Clare fishing community was less than  $\notin$ 32,500 per year. This is in comparison to average income for all employees which were  $\notin$ 37,500 in 2008. However, income from fishing was higher than beef or sheep farming, the two main agricultural systems in West Clare. However, most fishers in West Clare believe that volatile economic climate, the poor returns from fishing, and the increasing operating costs in the industry will continue to cause a decline in fishing. From the SAPS analysis provided in Section 3, it is evident that primary industries have declined over the last 25 years. As the population of West Clare has risen, the population of fishers has fallen because of the major start-up costs and higher returns in other industries. Higher education levels have also reduced the amount of potential fishers as those with higher education tend to seek employment in industries which maximise returns to their skills base.

Although the survey covered 58% of the sample of the inshore fishers in Clare this only accounts for less than 1% of the inshore fishing sector in Ireland. Thus, a more comprehensive study covering the whole west coast of Ireland would be of greater interest. A larger survey would allow policy makers to draw direct comparisons between other natural resource based industries (particularly agriculture) and the economy as a whole. While this paper does have it limitations it has provided a valuable insight into the inshore fishing industry in West Clare and provides a basis for further work in this area.

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