Will I clear my feet?

Vessel owners’ stay or exit dilemma in a stock recovery situation.

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Seafish, UK
Literature – entry / exit

- Clark et al., 1979, Amundsen et al., 1995, Bjorndal, 1988, Bjorndal, 1987 – fleet level approach. Vessel entry and exit, neo-classical view of firm, assuming owners are profit maximising, and one vessel = a firm. Firms enter when profits are made by a fleet, when average profits decline, vessels exit. Model expected total amount of vessels / capacity in fleet.


- Ekanem, 2005, Spence and Rutherfoord, 2001 - Finance literature, investment decision making, small or owner-managed businesses. Techniques and approaches used in owner-managed small firms, different corporate purposes, ability to raise finance, levels of uncertainty, therefore appropriate to take different approach to decision-making.
Various Models

- Predict size / capacity of total fleet each year in response to recent average revenues / profits / catch rate etc.
- Predict probability of stay / entry / exit outcome (discrete choice) for individual vessels based on various fleet level, vessel and owner characteristics.
- Predict choice that has highest level of utility based on individual characteristics – can aggregate to group level predictions
- Predict value of alternative income necessary to induce exit based on individual characteristics
Factors affecting entry / stay / exit decision

- Existence of decommissioning scheme
- Age of vessel
- Value of vessel on 2nd hand market
- Relative productivity of individual vessels
- Congestion of fleet proxy
- Gross surplus of the vessel
- Owner’s anticipated future profit
- Owner’s years of experience as skipper
- Presence of a successor to the business
- Degree of dependency on bank mortgage
- Profit uncertainty
- Recent profits
- Vessel size
- Education of owner
- Alternative occupation
- Income potential
- Age of owner
- Crew size of vessel
- Interest rate
- Total revenue
- Market share of the firm
- SSB of key target species
- Owner characteristics
Quotes from the literature...

- Home port is shown to have a significant impact on the decisions of vessels
- ...vessels were interviewed to collect data
- The number of vessels taking a decision to enter, stay or exit this fleet...
- Vessels were more willing to join a fishery when profits are high than to exit when profits decline
- A multinomial logit formulation was designed to evaluate the decisions of vessels.
Context of study

• Cod Recovery Plan was reducing fishing opportunities in North Sea
• Scottish government introduced Fleet Resilience Grant scheme of 2010 / 2011
• grants to scrap vessels – max value the lower of £250,000 or insured value of vessel
• opportunity to “park” licence entitlements to days at sea on licences of remaining boats
• created an incentive to consolidate fishing rights onto fewer vessels
Scotland

Area of catch for white fish species, Scottish vessels, 2010. Source: Marine Scotland
Dark shade = higher volume
White fish segment
Nephrops segment
Stock recovery – North Sea Cod

Spawning Stock Biomass

- Bpa
- MSY Btrigger
- Blim

SSB in 1000 t

Year:
- 1963
- 1968
- 1973
- 1978
- 1983
- 1988
- 1993
- 1998
- 2003
- 2008
- 2010
## Fleet Resilience Scheme

Involvement of vessels owned by study participants

<table>
<thead>
<tr>
<th>Study vessel starting status</th>
<th>No. of vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entered into Fleet Resilience Scheme</td>
<td>32</td>
</tr>
<tr>
<td>Not entered into Fleet Resilience Scheme</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study vessel outcomes</th>
<th>No. of vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kept</td>
<td>14</td>
</tr>
<tr>
<td>Sold</td>
<td>6</td>
</tr>
<tr>
<td>Scrapped</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcomes for study vessels submitted into Fleet Resilience Scheme</th>
<th>No. of vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kept</td>
<td>5</td>
</tr>
<tr>
<td>Sold</td>
<td>5</td>
</tr>
<tr>
<td>Scrapped</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>
### Vessels entered into Fleet Resilience Scheme

<table>
<thead>
<tr>
<th>Outcomes for all Vessels submitted into Fleet Resilience Scheme</th>
<th>Number of vessels whose owners were interviewed for this study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawn from scheme (some sold privately, some kept)</td>
<td>12 9</td>
</tr>
<tr>
<td>Timed out (not scrapped by deadline)</td>
<td>3 1</td>
</tr>
<tr>
<td>Scrapped</td>
<td>38 22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>53 32</strong></td>
</tr>
</tbody>
</table>
Interview questions

- What factors do owners take into account when making decisions relating to investment, exit or switching from one fishery to another?
- What values and beliefs do vessel owners hold that influence their decision-making?
- How do owners identify their specific options in relation to staying or exit?
- Who / what type of person is considered most influential in a decision making process? (e.g. professional advisers, family, ancestors, etc)
- What difficulties do owners experience as they try to identify options, evaluate options and make their choice?
- How do owners approach the issue of risk and uncertainty in the decision making process?
- What expectations do vessel owners have of the financial performance of their fishing businesses?
Scrapping scheme announced

Decide bid & wait for offer from government?

Put boat in scheme?

Accept offer?

Scrap boat & get cheque from govt.?

Sell boat?

Buy new boat or put quota onto other boat(s) already owned?

Leave fishing?

Take other job, retire, & / or lease out quota

Remain as owner only

Stay as skipper?

Keep fishing

Decision tree for owners of fishing vessels upon hearing of Fleet Resilience Scheme

Scrapping a boat does not necessarily mean quitting as an active skipper, which does not necessarily mean quitting as vessel owner.
Age of owner

"well we knew what the ceiling was, 250,000, we had a rough idea what we’re quota was worth and took financial advice and my age...”
[Scrapped. Quit]

The decision was, it was really easy to take. I can see I’m young enough that I can do something else.”
[Scrapped, Quit]

"...and we had to spend over £200,000 on the boat and weighing up the age of the boat, weighing up my age...”
[Scrapped, stayed, owner & skipper smaller boat]

"... and I'm thinking that at my age, am I needing all this stress? Do I have to do it? I don't.”
[Scrapped, stayed, owner & skipper smaller boat]

I should have been able to retire and I won’t have enough money to retire. I'll have to keep working.”
[Scrapped, Quit]

So I have decided, even though I'm 50 year old that I’m staying in the industry”
[Owner & vessel Stayed]

and I didnae fancy the idea of retraining after we’d sold the business, paid off the bank loans, the debt. Yes there was an attractive sum there, but certainly I dinnae think enough to last me the rest of my days. I would have had to retrain and get a job, something else.”
[Owner & vessel Stayed]

"so I couldn't see it was in my interest at 41 years old to go and invest £1million plus into the industry, which would make me have to go even harder at the fishing to pay a bank loan, er, I'm getting to the stage in life now where I'd like a little bit more time at home, not less. ”
[Scrapped, Quit]
## Age of owner

<table>
<thead>
<tr>
<th>Ages</th>
<th>Influence on quit decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 35</td>
<td>Confident succeed: unlikely to quit unless failing and can get clear of debt</td>
</tr>
<tr>
<td>36 – 45</td>
<td>More confident able to get new job, more need of new job: more likely to quit if can get clear of debt</td>
</tr>
<tr>
<td>46 - 55</td>
<td>Less confident of getting new job, less keen to change, less able to raise new finance: more likely to stay even if can get clear of debt and / or not much profit</td>
</tr>
<tr>
<td>56+</td>
<td>Low chance of other job, shorter period needing other income: more likely to stay if can’t get clear of debt. More likely to quit if can get clear of debt</td>
</tr>
</tbody>
</table>

**Factors:**
- Expectation of ability to earn acceptable alternative income
- Physical capability to work
- Own health
- Need other income to keep going if sale of business won’t keep household until he retires
- If need to reinvest to stay in – time remaining to pay loan affects ability to raise new finance
- Desire to work hard enough to pay new loan
- Likelihood of hiring suitable skipper if can’t skipper himself
"but I do think that if we’d remained at it, we could have been saying in five years’ time, why did we nae walk awa’ five year ago?“ [Scrapped, Quit]

"My quota bill was going to increase by £60,000 at least for this coming year“ [Scrapped, owner stayed, small boat]

"I couldn’t see a light at the end of the tunnel so this was a good escape route, sort of cleared my feet and forget about it.“ [Scrapped, Quit]

"... stock harvest rates down to MSY in 2015, opportunity, and cost as a result of lack of opportunity is going to increase, that leaves you less capable of investing because you’re just not returning the money to the bottom line “ [Sold, Quit]

"It’s brought me to my knees. Well not quite, but not far off it. If it had gone on another couple of years, I would come to a position where the tradesmen wouldn’t come down, cos he wasn’t getting paid “ [Scrapped, Quit]

"Well to be honest if we’d kept going the way we was going, I’d say the bank would have tied us up. They’d say enough’s enough “ [Scrapped, Quit]

"ok she’s old, but for my mode of fishing she’s quite an economical boat to fish with” [Owner & vessel Stayed]

"Will fuel cripple us? It’s almost like dog eat dog now. You’re hoping that you’re one of the survivors, and hoping that ... well if it keeps cutting you’ve got to catch less, and hope you still get a slice of the cake that’s left, that you’re there to get it” [Owner & vessel Stayed]

"‘My quota bill was going to increase by £60,000 at least for this coming year” [Scrapped, owner stayed, small boat]
“The biggest difference between me and John is, I’ve got a son” [Owner & vessel stayed]

“I’ve looked at a new build, and a 50 year old with no son coming behind me it’s step too far.” [Owner & vessel stayed]

“The only thing that I have just now, a little bit of lifeline, hope, is that there’s a guy been with me since April and I’ve encouraged him ... He is showing potential” [Owner & vessel stayed]

“Well, there was a few factors behind the decision. One that was at the forefront of my mind was that my son was going to be going to sea” [Owner & vessel stayed]

“What’s a sort of wee bit prospect on the horizon is my nephew, has come aboard the boat, he’s 17” [Owner & vessel stayed]

“But I’ve got two sons in law, for the future” [Scrapped, stayed owner only other vessel]

“But I just spoke to my son, he’s with me in the boat, and he was getting fed up as well” [Scrapped. Quit]

“The biggest difference between me and John is, I’ve got a son” [Owner & vessel stayed]

“my son followed me aboard the boat, but when I came ashore 7 years ago ... he left as well” [Sold. Quit]
Will I clear my feet? Need or hope to get clear

“well we knew what the ceiling was, 250,000, we had a rough idea what we’re quota was worth and took financial advice and my age…” [Scrapped. Quit]

“If everything comes in, … we should clear we’re feet.” [Scrapped. Quit]

“It was a chance to get out with the decommissioning scheme and the value in the quota, and the days at sea. Financially it made a lot of sense.” [Scrapped. Quit]

“Aye, I’ll need that plus the price of the quota to clear my feet.” [Scrapped. Quit as owner]

“I couldn’t see a light at the end of the tunnel so this was a good escape route, sort of cleared my feet and forget about it.” [Scrapped. Quit as owner]

When we put the boat for sale, we had a figure that we wouldn’t go below … but if there was no decommissioning we’d probably still be there today. [Sold. Quit]

They were looking at it as a mechanism to get rid of an old boat, that there probably was no market for. But their liabilities were such that £250,000 you know, it would have cleared their feet but it would have left them nothing to into the market with to renew. [vessel agent]

Yeah, we came out with something, I mean it was pretty much what we put in, but we came out with something. [Sold. Quit]
Will I clear my feet?
Need or want to quit/scrap, even if don’t get clear

Oh, we came out behind, no question, ... there wasn’t enough funds from the decommissioning to clear the debts on that vessel. [Scrapped. Stayed, multi-vessel owner]

“but tell you the truth I was so desperate to... even being a small amount of debt I think I would have still gone. ’d have just tried to pay it off. “ [Scrapped. Quit]

even if I have to sell the quota and come out with nothing, not a penny, I would still do it. Because just to get free of the burden would be such a fine thing, a good thing. [Scrapped. Quit]

“We’ve actually come out of it a lot worse off, about maybe £90,000 worse off than when we got the boat” [Scrapped. Quit]

it was a way out and we took it ... But... out that money the bills that was lying, I think I wrote a cheque to X for £40,000, there’s nothing left out of the £285,000, ... there’s nothing to retire on [Scrapped. Stayed as Owner & Skipper of other vessel]
Will I clear my feet?
Might /do want to scrap, but stay because can’t get clear

“So, we’ve got £150K worth of debt, overdraft, we’ve got a £50k balancing charge, we’re now up to £200K and just, general invoices and debt that would be accruing ... so effectively you'd be lucky if you could clear your feet with the debts.”
[Owner & vessel Stayed]

One or two spoke about it but you know, it was pretty obvious pretty early on that the kind of scheme that was being offered, they could not afford to take it. The maximum was £250K, it was a pipe dream.
[vessel agent]

“we would have scrapped as well but the figures didn’t add up. Because you’re operating wi’ your hand behind your back and there’s no way you can reduce the loan”
[Owner & vessel Stayed]

“if I’d had enough to clear the debt, ken, clear a’ your balancing charge, the tax, even though you kinda walked awa’ guy near level. ...
...I do think if it had been a different kinda get oot clause, and everything’s goin’ to be covered, I probably would have gotten oot.”
[Owner & vessel Stayed]

yes, but I couldn’t consider it because the maximum value was 250 insured value and we’re about 5 times that, so there was no way we could apply. But if it had been to maximum insured value I would have been at the front of the queue.
[Owner & vessel Stayed]

Noo we’re in a situation, oor boat’s probably maybe worth nothin’ on paper, but to me it’s worth, fit I’m saying to you, it generates income.
[Owner & vessel Stayed]

“I was totally aware of it. But as soon as I heard the figure 250,000 that just switched me off.
[Owner & vessel Stayed]

“And become debt-free, see that’s the other thing that you dinnae look at, at the time. There is a balancing charge to be paid to the Inland Revenue when you wind up the business.”
[Owner & vessel Stayed]
Factors considered feed into three key questions:
1. Do I want to quit this vessel?
2. Would I be free of debt if I wound up now?
3. Do I have enough cash to stay solvent?
What next?

maybe....
Principal Components Analysis

Thank you

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