

Quota Prices, Economic Performance of the fleet in Norway

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By

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Policy motivation for fisheries regulations

1. Maintain the fish stocks
2. Secure MSY
3. Improving vessel profitability & reducing subsidies

Norwegian Fishery Economic Policy

- Profitability to be improved
 - Entry control & Individual transferable fishing rights (licenses) ITL
 - Two or more vessel quotas allowed to merge to one vessel if vessels are withdrawn from fisheries
 - Government respected private trade agreements prior to approving transferring of licenses
 - A quota market opened
 1. Off shore fleet before 2000s
 2. Coastal vessel after 2000s
- Norwegian subsidies reduced during the 1980s & early 1990s

The consequences

- The prices of fishing rights has increased significantly
 - Resource rents (super values) are pulled out of the industry
- Increased capital effort has restructured the fleet especially the bigger ones
 - Number of fishers reduced significantly
 - Concentration of the fishing rights on companies and fishing ports
 - BUT: The total capacity (HP) has been growing until 2003
- The net value added from harvest has increased over time.
 - Capital has over time gained over crew
 - BUT still: The smallest coastal vessels adds more value from catch than the bigger vessels

The consequences

- Resource rent as a super added value are harvested in Norwegian fisheries
 - Both by capital & crew in pelagic fisheries
 - BUT: No capital resource rent harvested in bottomfish fisheries
 - Crew harvest the resource rent in bottom fish fisheries
 - An advantage for economic activities in the remote costal societies

A quota market was created

- Governmental secured property rights (licenses with quotas) for a limited number fishing vessel owners
 - Competition among fewer vessels & against new entrants
 - Entry license barriers,
 - Allowing merging & acquisitions reduce quota
 - Fewer vessels, same TAC, more catch per vessel

A quota market was created

- Quota market combined with monopoly trading rights => a profit guarantee in a market where fish prices increase
 - The Norwegian rawfish act gives the fishers sales organizations
 - Exclusive trading right for raw fish
 - Authority to dictate minimum prices (if needed)
- The value of the license property rights increases independent of catch, production & market performance

Quota prices

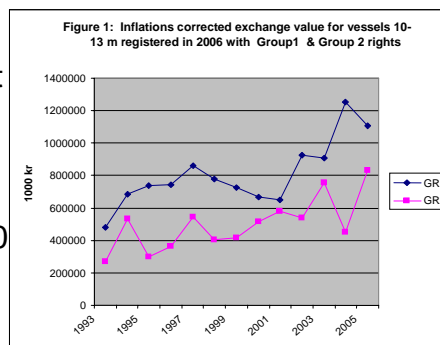
- Norway does not have an transparent quota market
 - No public register, auction or registration as in Iceland
- The value of quota is included in the vessel price when vessel ownership are exchanged
 - Total vessel prices where quota can be attached, are registration in The Norwegian Ship register and in the individual ship broker lists

Indications of Norwegian quota prices (Shipbroker data)

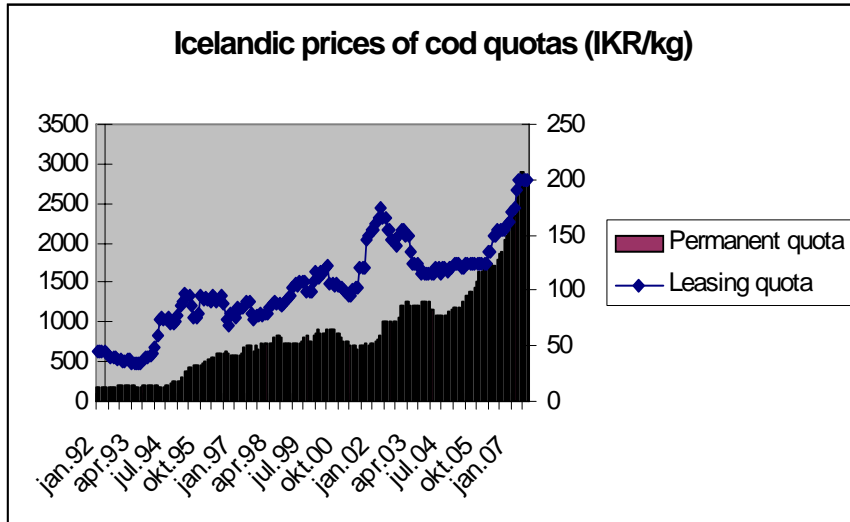
Year	2002	2006
Fishing right:	NOK/kg cod equivalent	
Herring/mackerel	60 -100	200
Bottom trawler	40 - 60	150
10-11 metre coastal vessel	3	7 -10

Quota prices estimate for vessels 10-13m (Ship Register Data)

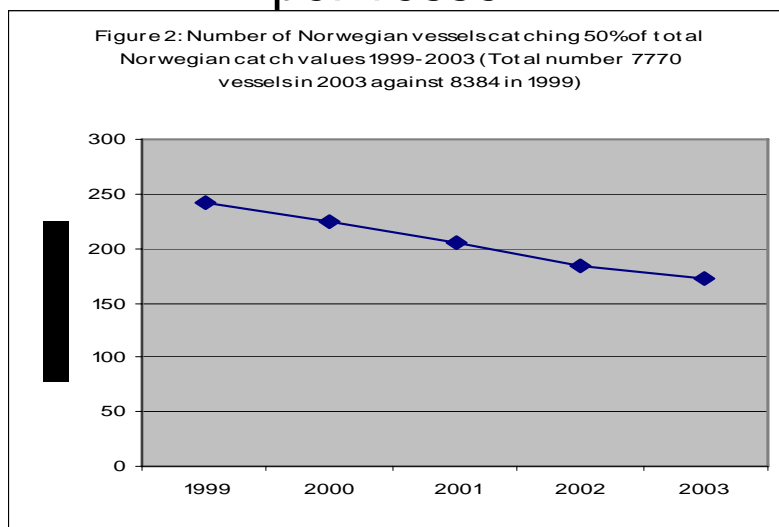
- A direct significant higher price for vessels where individual quota rights was attached
- Estimate 2006: 11 about NOK 7/kg per kg cod equivalent
- Attractive price level for acquisition. Bigger vessels paying up to 150 NOK/kg
- Acquisition restricted by regulation

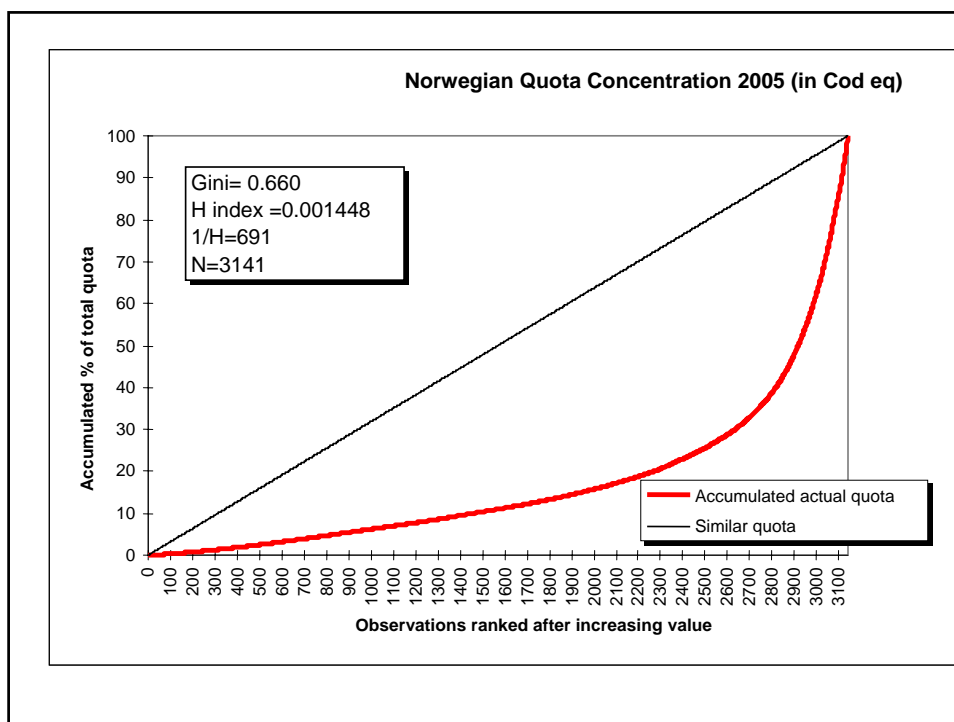


Icelandic quota market



Increasing concentration of catch per vessel





**Concentration of fishing power and
 the value added:
100 families controlled 50% of the
 Norwegian TAC in 2005**

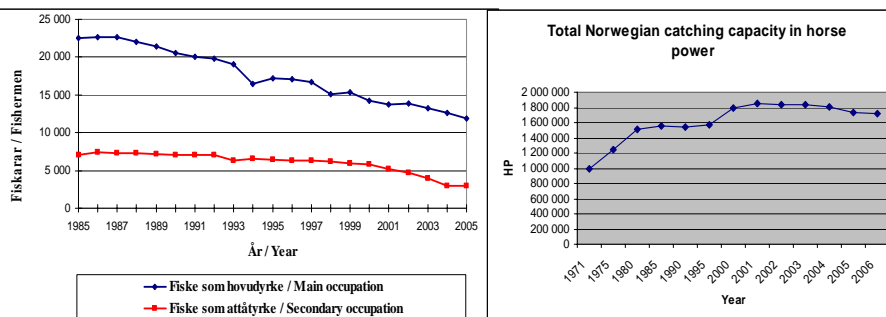
Rank	Vessels	% of Cod equivalent	
			Accumulated
1	16	6,4 %	6,4 %
2	11	3,2 %	9,6 %
3	5	1,9 %	11,5 %
4	4	1,6 %	13,0 %
5	4	1,5 %	14,5 %

(Cod equivalents= all Norwegian landings of all fish species measured from relative sales value to cod according to Directorate of fisheries statistics)

Geographical concentration of catch and landings from North to South

Norwegian total landings in million Cod equivalents	800 - 1200	
Share of Norwegian catches >65°N	70 %	
	Year:	
	1999	2004
Share of Norwegian catches by vessels registered >65°N	53 %	52 %
Share of Norwegian catches landed >65°N	56 %	52 %

Fewer fishers, but more catching capacity (In engine HP)



How to measure economic performance in fish harvesting?

- Many stakeholders in fish harvesting on the society level
 - Vessel/ Equity owners
 - Fishermen/Crew
 - Finance institutions
 - Regional communities & governments
 - National government
- How is value adding allocated among stakeholders
 - Owners, Crew, Finance/ & Community
- When the fish stocks are limited:
 - high economic performance in one group may reduce performance in other groups

How to measure economic performance?

- There are current evidence that neither capital, nor labor are limited factors in the EEA as a whole (even if local supply temporary may be so)
 - BUT, fish stocks are: How is the value added in harvesting fish stocks as a limited natural resource?

How to measure economic performance in harvesting fish?

- Resource Rent:
 - A super value added in harvesting fish higher than normal in alternative use of labor and capital
 - Resource rent =
 - Total sales revenue
 - ÷ Running operational costs ÷ Labor costs ÷ Capital costs
 - ÷ Normal alternative capital & labor net income
- ITQ price = Resource rent price
 - Increasing ITQ prices are tapping out the Resource Rent from fisheries and into the finance industry
 - The capital ITQ costs will increase to a level where the resource rent left in the fisheries is close to zero given the risk involved

How to measure economic performance in harvesting fish?

- Net Value Adding (NVA)
 - Sales value of fish ÷ and the cost of inputs used in harvesting ÷ depreciation
 - Similar to NNP in the National accounts
 - =GDP (Gross Domestic Product) ÷ Depreciation
- NVA % = Net Value Added of sales (=production value)=>Value added of the limited TAC

NVA% in selected Norwegian Industries (Owner & labor) (Source: Norwegian Statistics bureau)

Natural resource industries in the lead

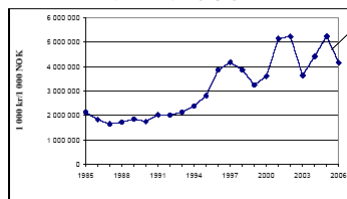
Table 5: NVA% in selected Norwegian Industries (Source: Norwegian Statistical Bureau)

Industry	2000	2001	2002	2003	2004
	%	%	%	%	%
Oil & gas	75	72	69	67	72
Forestry	65	65	67	67	63
Fishing	41	30	48	39	44
Beverage	25	35	33	37	42
Metals	38	38	40	41	40
Textile	34	37	36	37	37
Mining	37	38	38	33	33
Timber	26	30	29	29	30
Rubber & plastic	29	30	31	33	30
Oil & gas services	26	22	26	28	28
Food processing	18	18	19	20	19
Wood processing	24	28	21	20	17
Oil refinery	14	15	14	17	16
Fish farming	34	9	1	1	14

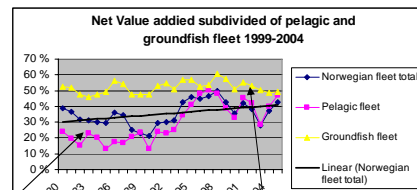
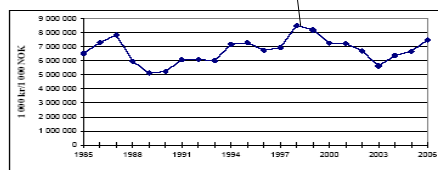
Increasing value added a structural & a TAC effect

- Highest value adding in groundfish fisheries
- Value adding follow total catch value trend in pelagic fleet

Figur 6A Fangstverdi (i 2006-verdier) for alle pelagiske arter, 1985-2006. 1000 kr.
Value of catch (in 2006-values) of all pelagic species, 1985-2006. 1000 NOK.

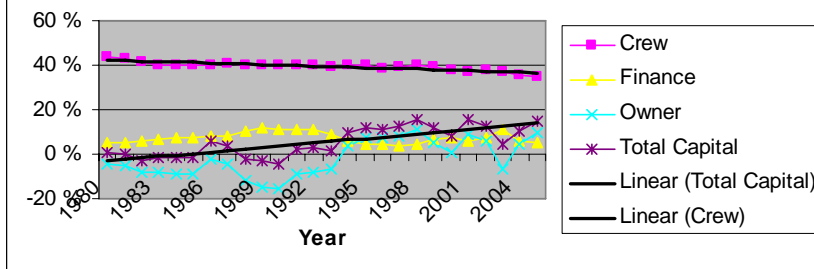


Figur 7A Fangstverdi (i 2006-verdier) for alle bomsfiskerter, skaldyr og skjel, 1985-2006. 1000 kr.
Value of catch (in 2006-values) of all groundfish species (incl. crustaceans), 1985-2006. 1000 NOK.



Capital value adding share increasing, crew share decreasing

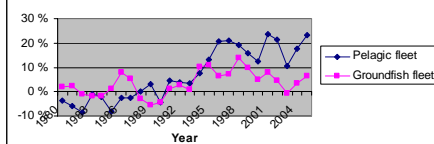
Figure 7: Net Value Adding of prod value (NVA%) in the Norwegian fishing fleet subdivided on stakeholders



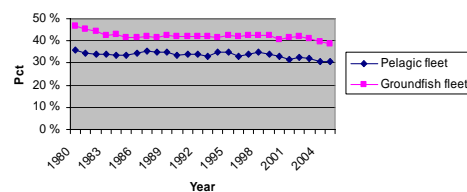
Capital gain especially in pelagic fleet

- Capital resource rent (Super NVA%) in pelagic fisheries, but not in groundfish fisheries
- Resource rent in groundfish fisheries gained by the crew

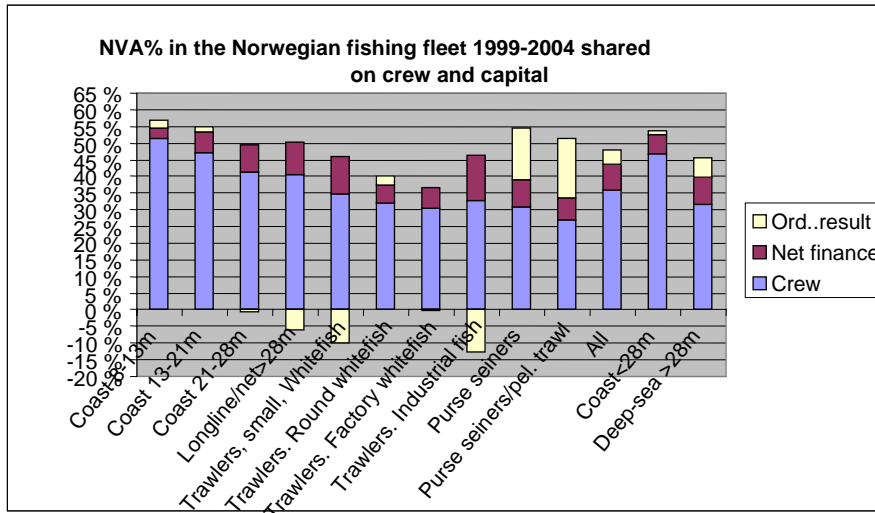
Figure 8: Net Value Adding on capital in Norwegian fleet subdivided on pelagic and groundfish fleet



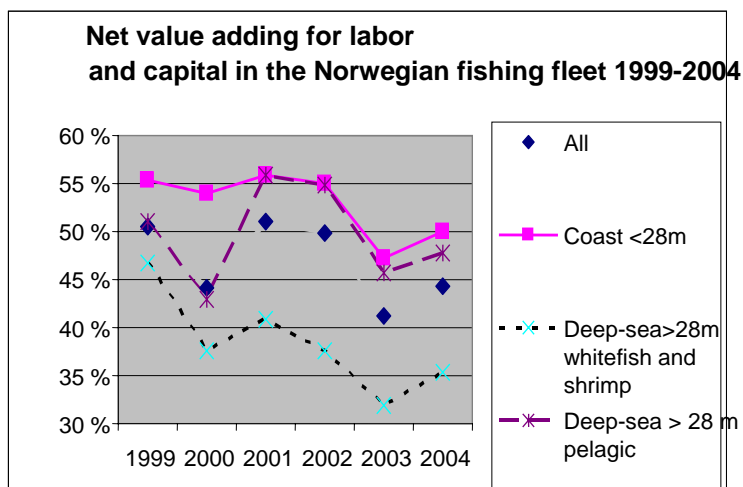
Crew Value Adding of prod. Value (NVA%)



Bigger capital intensive vessels do not add more value than smaller vessels.



Stable value adding structure over time?



TAC & ITQ

- The government controls allocation of the TAC
 - The more capital in the fisheries, the more economic & political pressure for increasing/keeping high TAC
 - Vessels without debt represent less economic pressure on TAC
- Still possible for reallocate the TAC
 - Quota auctions or resource taxation are instruments for the government to pull in resource rent
- Regional management systems are discussed
 - Quota management system in line with the producer organization (PO) in the EU
 - Quota auction systems where the PO or other NGO/GO auction share TAC of an allocated group TAC to individual vessels on shorter or longer contracts.

My Conclusions

- The prices of fishing rights increase significantly
 - Resource rents (super values) are pulled out of the industry
 - Increased capital effort are restructuring of the fleet especially the bigger vessels
 - Number of fishers reduced significantly
 - Concentration of fishing power and fewer hands and economic activities from fisheries to fewer fishing ports
 - BUT: The total capacity (HP) has been growing until 2003
- Value adding in the fishing fleet has increased over time.
 - Capital has over time gained over crew
 - The smallest coastal vessels adds more value than bigger vessels

My Conclusions

- Resource rent are harvested in Norwegian fisheries
 - Harvested by both capital & crew in pelagic fisheries
 - No capital resource rent harvested in bottom fisheries
 - Crew resource rent harvested in bottom fish fisheries
 - An advantage for economic activities in the remote costal societies

Limitations

- All the findings presented in this paper have been generated from past Norwegian regulatory and ecological contexts.
- In another context, the results might have been different.
- Different models might apply in different areas and management contexts