THE ALLOCATION OF FISHING PERMITS: A PROPERTY RIGHTS APPROACH

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THE BROAD QUESTIONS

Debates:

• Who should own and benefit from natural resources?
• How best to manage, conserve, and maximize returns?
• Private or political/bureaucratic?
• Stock, value of production independent of the answer?
**Fundamental points:**

- Long-term economic returns determined by the allocation and security of property rights in the fishery.
- In general: Grandfathering is superior to auction reallocation.
OVERVIEW

Debate: ownership, management, and sharing of natural resource returns.

- Minerals and farm land: Data, literature.
- Fisheries—Shift to rights-based management (RBM).

Property Rights Theory.

- Economic value protected/generated.
- First possession rights.
- Allocation matters.

Compare auctions/grandfathering.

Conclusion.
THE DEBATE

One view: Public resources.
- Regulated entry/use.
- Returns taxed/distributed by government. Revenue objectives.
- Access spread among the population. Periodic reallocation. Distribution goal.
- Key assumption: Resource stock/economic returns unaffected by allocation.

Another view: Private resources with spin off benefits.
- Private property rights maximize long-term economic returns/government revenues.
- Entry/use restricted to owners. Stock protected.
- Economic decisions molded by market conditions.
- Key assumption: Private rights depend on security, minimized taxes, regulation.
DEBATE: GRANDFATHER VS. AUCTION

- Grandfathering: Private role dominant in resource use.
- Auction (Repeated): Government role dominant.
- Outcome prediction: Repeated auction reduces long-term fishery revenues. Less investment, innovation in new stock discovery and new methods.
- No empirical tests in fisheries. Look to other resources—theory and evidence.
Countries face international competition. Mobile capital, labor.

- When firms granted long-term secure property/production rights, the economy benefits: jobs, service support, processing, tax/royalty revenues. Chile, Australia.

- Taxes affect exploration and production.
  - Royalty: % of production, gross returns, or net returns. Risk distribution varies (Leland, 1978). Firms shift from heavily taxed/regulated activities, reduce investment, long-term production (Smith 2014).

- Venezuela a cautionary example, oil nationalized, heavily taxed, low production, revenue.
EVIDENCE: FARM LAND

Agriculture successful with secure private property rights.

- Taxes on fixed assets, land; profits/income taxes.
- Production--small, family farms (Allen, Lueck. 2003)

No repeated auctions, limited forced redistribution.

- Collectivization of agriculture in USSR, China, eastern Europe. Dropped.
- Redistribution---Mexico, Brazil, Zimbabwe—lower productivity, income.

Lessons from other resources suggests that safe, long-term property rights promote investment and maximization of the value of production.
EVIDENCE: FISHERIES

Fisheries: Tragedy of the Commons.

- No property rights. Common-pool resource.
- Rule of capture, race, short-time horizon, no incentive to conserve.

Initial response: Government Regulation/control—limited entry, season, equipment controls. Largely ineffective; fishery rents open for competition.

EVIDENCE: FISHERIES

RBM: Vast improvement (Costello et al, 2008).
- Remains contentious (Hannesson, 2004; Leal, 2005).
- Debate over nature of property right, taxation, trade, grandfather, auction.
- Property rights insecurity lowers value (Grainger and Costello, 2014).

What does this mean? Review Property Rights Theory: Attributes, Benefits, Threats.
RBM: ADVANTAGES OF PRIVATE PROPERTY RIGHTS

Attributes:

- Define time periods—in decisions for investment, production.
- Define security in decision making. Security raises expected returns.
- Facilitates trade/exchange—Know the parties, security for trade.
- Facilitate cooperation among owners.
- Promote investment, innovation/search—New techniques, new resources.
RBM: ADVANTAGES OF PRIVATE PROPERTY RIGHTS

Benefits:

- Fisheries. Reduce entry; excessive harvest; over capitalization; improve value; exchange (Grafton et al, 2002).
- Fishers capitalize the expected value of benefits with RBM.

Attributes/Benefits explain the move to RBM from larger government role.
Threats that reduce benefits of private property rights.

- Short ownership time horizon. Less long-term investment, conservation incentive, trade, innovation; changes resource use practices.
- Uncertainty of ownership. Less security leads to less trade, investment, innovation, conservation incentive.
- Greater taxation of returns. Reduces expected returns of investment, innovation, production, trade. Depends on tax design.
- Greater regulation of ownership. Raises costs, reduce decision making authority.

Long-term, secure private property rights with limited taxation and regulation maximize long-term economic returns and therefore government revenue.
FISHERIES: AUCTION VS GRANDFATHER

How to allocate quota/shares in RBM?

Industry background influences answer.

- International competition. Firms price takers. Compete on quality or cost. Requires long-term commitment, expertise, investment.
- Typically, low profitability.
- High levels of uncertainty—stock, environment, market.
- Production scale often small. Labor and capital local, limited mobility.
- Variable skills from experience that are difficult to exchange.
When are auctions used?

- Well-defined owner.
  - Controls asset. No incumbent producers/users.
  - Sell asset or production rights.
  - Maximize the number of buyers/bidders.
  - Maximize sales revenue.
  - Open up resource to specific parties.
- Competitive auction reveals value.
- Complexity of design, size, allotments, collusion.

Examples

- Air emission permits. California. EU ETS. Revenue imperative.
FISHERIES: AUCTION

Auction—Fishing right allocated based on winning bid. Characteristics determined by government officials—politicians/bureaucracy.

- Who can participate?
- Competition?
- Size of allotment?
- Duration?
  - One time auction?
  - Repeated?
- Trade? Consolidation?

Revenues to the state. Tax.
- Tax depends on auction design.
New fisheries: Auction allocation?
- How discovered in the first place?
- Incumbents?
- Search incentives lower if required to submit to auction?

Single auction—allocate production rights.
- If tradable, free allocation or auction have same distributional outcome.
- Auction is a tax. Could lower investment, search.

Repeated auction—periodic reallocation.
- Tax.
- Efficiency effects. Short time horizons, uncertainty. Quota values fall as quota period ends.
Auction open the industry to new fishers?
- New fishery?
- Existing fisheries with incumbent fishers?
- Difficulty in transferring skill and local knowledge to new winners.
- Potential to limit access to banking/capital. Specialized information. US farming example.
- Costs to those with less experience of forming sensible bids.

Cost to government of preparing/holding auctions to achieve objectives; complex design.
Could raise short-term government revenues, depending on cost.
Revenue goals dominate resource management.
May damage long-term wealth generation from the resource.
May not achieve distributional goal.
FISHERIES: AUCTION VS GRANDFATHER

Auctions very limited.

- Some new fisheries with no incumbents—Chile, Australia (Lynham, 2014).

Grandfathering dominates (Lynham, 2014).

- Usual explanation—political expediency
- Universality implies efficiency gains.
FISHERIES: GRANDFATHER

Assigns limited ownership based on historical catch.

- Commitment to existing fishers with success in the fishery.
- Security for financing.
- Rewards most efficient fishers. Experience. Local, time and place specific knowledge. Insights into the stock.
- Rewards enterprising fishers, who discover new fisheries/fishing opportunities.
- Aligns incentives with stock value: Recognize that human and physical capital invested in the fishery depend upon the stock.
- Design cost: Limited potential for corruption in allocation—determine historical time period. There can be a rush to establish production histories.
FISHERIES: GRANDFATHER

Who benefits from grandfathering?

- Incumbents.
- Fishing labor on fixed (catch) shares.
- Society from long-term fishery revenues. Indirect to suppliers, processors.
- Resource stock.
- Private property rights reduce role for politicians and bureaucracies.

Who benefits from auctions?

- Possibly new fishers in some cases.
- Regulatory agencies may gain more control over the fishery.
FISHERIES: GRANDFATHER

**First Possession.** Ownership based on priority in time, historical use/production.

- Most common property rights allocation mechanism.
- Civil and Common Law.

Efficiency advantages of first possession (Epstein 1979).

- Recognize existing users, most efficient outcompete.
- Reward local information generated from prior use.
- Reward search. Discovers become owners.
- Market decides size of allotment. Efficiency criteria, rather than political or bureaucratic, determine allotment size. May not be so in auctions.
APPLICATION TO FAROE ISLANDS

Fishing industry: Pelagic, Demersal fisheries. Major contributors to GDP.

- Critical to do this right.
- Resource-based economy. Long-term protection of the stock and industry vital.
- Lessons: Protect property rights to encourage investment and long-term revenue.
- Major international competitors.
  - Competitive strategy--quality differentiation.
  - State of the art cooling; new vessels/equipment; training of labor.
  - Long-term commitment, investment by industry.
- Allocation of quota/tax policies influence long-term performance.
CONCLUSION

- Natural resources can be a blessing or a curse.
- World wide debate over ownership and distribution.
- Depends on property rights allocation, security, and returns.
- Objective is to promote industry development and long-term economic benefits.
- Secure property rights advance this objective.
- Grandfathering is consistent with secure property rights.


REFERENCES


