The Challenge of Local Permit Ownership in Alaska Salmon Fisheries

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Conclusions . . .

• Over time, permit markets allocate permits over time to the individuals who are willing and able to pay the most for them.
• Any factors that differentially affect what local and non-local residents are willing and able to pay for permits may affect local permit shares over time.
• As salmon fisheries become more profitable, local residents’ cost advantages matter relatively less as a factor affecting local shares, while non-local residents’ advantages, such as access to financing, matter relatively more.
• As salmon fisheries become more profitable, the non-local share is likely to rise.
• This leads to a conflict between two important policy goals: increasing fishery profitability and maintaining local permit ownership.
• There are no easy solutions to this conflict.
Conclusions . . .

- When fishery managers create tradable fishery access privileges, regardless of the initial allocation of those privileges, markets become powerful forces for the reallocation of privileges over time, both among individuals and among geographic regions.
- Great care should be taken in creating tradable fishery access privileges and in considering potential restrictions on how and to whom they may be traded.
In Alaska, there is significant concern over a long-term decline in the shares of salmon limited entry permits held by local residents and by Alaskans.

Who Holds Limited Entry Permits for Alaska Salmon Fisheries?
FROM THE INTRODUCTION TO THE ANNUAL CFEC PERMIT DISTRIBUTION REPORT:

“... Many people remain concerned that permit transfers might result in undesirable consequences with regard to the distribution of permits. There is a concern that permits will leave the state, or that permits will disappear from isolated fishing communities which are local to a limited fishery, thereby eroding the economic base.”
There is wide variation between Alaska salmon fisheries in trends in local ownership over time.

Share of Permanent Permits Held by Local Residents, by Fishery
Research Questions

• What explains historical changes in local permit ownership?
• How do management policies affect local permit ownership?
• What can be done to increase local permit ownership?
• What explains the geographic distribution of ownership of transferable fishery access rights over time?
Potential components of changes in local permit ownership

- **Permit transfers:**
  - transfers between local and non-local residents

- **Permit migration:**
  - Migration of permit holders between local and non-local regions

- **Administrative changes:**
  - Issuing new permits to or revoking permits of local residents

- **Changes that happen in the data but not reality**
  - Changes in addresses but not where people actually live
Both transfers and migration have played significant and varying roles in changes in local permit ownership.

**Causes of Change in Local Permit Ownership, 1975-1988**
(Expressed as Percentage of Initial Allocations to Local Residents)
The relative effects and scale of net transfers and net migration has varied from year to year and over longer periods.

Causes of Change in Local Ownership of Bristol Bay Drift Gillnet Permits, 1975-2008
Initial allocation of limited entry salmon permits

- Occurred in 1975 (most fisheries)
- Issued for free based on
  - “(1) the degree of economic dependence upon the fishery, including . . . the percentage of income derived from the fishery, reliance on alternative occupations, availability of alternative occupations, investment in vessels and gear; (and)
  - (2) extent of past participation in the fishery, including . . . the number of years of participation in the fishery, and the consistency of participation during each year”
- Goal was to ensure that significant numbers of rural local residents received permits in regions of Alaska with limited other economic opportunities.
- NOT a market allocation!
Initial allocations matter

- Greatly affect who benefits from the creation of access privileges
- Usually the subject of intense debate
- But initial allocations are not all that matters!
- Over time, market forces may greatly change the distribution of privileges from the initial allocation
- How access privileges are designed affects their future distribution
  - Transferability
  - Restrictions on use
- We need to think just as carefully about the future implications of the design of access privileges as we do about their initial allocation
An economic theory of permit transfers between individuals. . .

Each year, every individual in the world has a permit valuation.

<table>
<thead>
<tr>
<th>Permit valuation =</th>
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<td>For permit holders</td>
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<td>For non-permit holders</td>
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Economic theory suggests that permit valuations will be:

• A positive function of expected future net benefits from fishing (market and non-market)

• A negative function of the rate at which individuals discount future profits
Individual permit valuations may differ for many reasons:

- Fishing skills
- Alternative employment options
- Access to capital
- Age
- Synergies with other activities
- Enjoyment of fishing
- etc.
We could rank everyone in the world in the order of their individual permit valuations:

• 1 Person with the highest valuation
• 2 Person with the second highest valuation
• 3 Person with the third highest valuation
• etc.
Assume initially (to simplify the discussion):

- No transactions costs for buying or selling a permit
- No speculation—people hold and buy permits only to use them
Suppose M permits are initially distributed by a non-market mechanism

- Transfers (sales) will occur from some initial permit holders to some non-initial permit holders until an “equilibrium allocation” is reached at which all M permits are held by the M individuals with the highest valuation rankings.
- We may refer these transfers as “adjustments to the initial allocation”
If individual permit valuations never changed . . .

- If transactions costs were zero and markets adjusted instantly
  - All transfers would occur immediately following the initial allocation and only as adjustments to the initial allocation
- If transactions costs are non-zero or markets do not adjust instantly
  - Full adjustment to the “equilibrium allocation” would not necessarily occur
  - Adjustments to the initial allocation would occur over a longer time period
If individual allocations change over time . . .

- Transfers will continue to occur over time as *adjustments to changes in valuations*.
- Transfers will occur:
  - from individuals whose relative permit valuation ranking rises from <M to >M
  - To individuals whose relative permit valuation ranking falls from >M to <M
Permit transfers occur over time for two different reasons:

- *Adjustments to the initial allocation*
  - Occur in significant numbers immediately or soon after the initial allocation

- *Adjustments to changes in valuations*
  - Occur in smaller numbers over time, particularly when conditions change in the fishery or economy
Adjustments to the initial allocation?

Source: Marcus Gho, *Changes in the Distribution of Alaska’s Commercial Fisheries Entry Permits*
A theory of permit transfers between groups . . .

• Transfers among groups are the net effects of transfers by individuals in those groups

• Transfers among groups may reflect:
  – Differences among groups in adjustments to the initial allocation
  – Differences between groups in adjustments to changes in valuations

• Over time, the share of any group in permit ownership adjusts towards the group’s share of the M individuals with the M highest valuation rankings

• Anything that changes the relative valuation rankings of members of different groups will tend to change the group’s share of permit ownership
The local permit share over time . . .

- The local permit share after the initial allocation reflects the initial allocation formula.

- Over time, the local permit share adjusts towards local residents’ share of the M individuals with the M highest valuation rankings.

- The non-market initial allocation of Alaska salmon limited entry permits almost guaranteed that significant transfers would occur as adjustments to the initial allocation.
Some factors tend to increase permit valuations of remote rural local residents relative to those of non-local residents:

- Lower transportation costs
- Fewer alternative employment options
- Greater local knowledge
- Cultural ties to the fishery

Other factors tend to increase permit valuations of non-local residents relative to those of remote rural local residents:

- Greater access to capital
- More economic synergies with other fisheries
Changes in fish prices or fish catches tend to change relative valuation rankings of local and non-local residents.

- If costs stay the same and revenues rise, profits tend to increase relatively more for non-local residents who can catch more but face higher fixed costs.
As a fishery increases in profitability

- Permit valuations increase for both local and non-locals
- Permit valuations increase relatively more for non-locals
- Relatively more of the M individuals with the highest valuations will be non-locals
- The non-local share of permits tends to increase

- *Cost differences are less effective in “protecting” locals from competition*
- *The fishery becomes relatively more economically attractive to non-locals*
We would expect dramatic changes in the equilibrium shares of permit ownership in the value of Alaska salmon harvests following limited entry, given the dramatic increase in the value of the fishery which followed.

Alaska Salmon Real (Inflation-Adjusted) Harvest Value

There is a clear negative relationship between the local permit share and average permit prices in Alaska salmon fisheries.
Local permit ownership tends to rise when permit prices are falling and to fall when permit prices are rising.
There is a conflict between two important policy goals: increasing fishery profitability and maintaining local permit ownership.

- Increasing fishery profitability
- Maintaining local participation and benefits
There is no easy or cheap ways to reverse the effects of market forces on local ownership of transferable access rights when government can’t “discriminate” in favor of local residents

- Private organizations can subsidize local permit buyers directly (loans, grants)
- Create community organizations to buy permits for (subsidized) sale to local residents

- Challenges:
  - *High costs*
  - *Who gets the subsidies?*
  - *Much of the subsidies may go to those who least need them*
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