

The Inner Workings of a Market for Transferable Fishing Privileges

Kari MacLauchlin

Sea Grant Knauss Fellow

NOAA Fisheries Office of Policy

University of Florida

School of Natural Resources and the Environment

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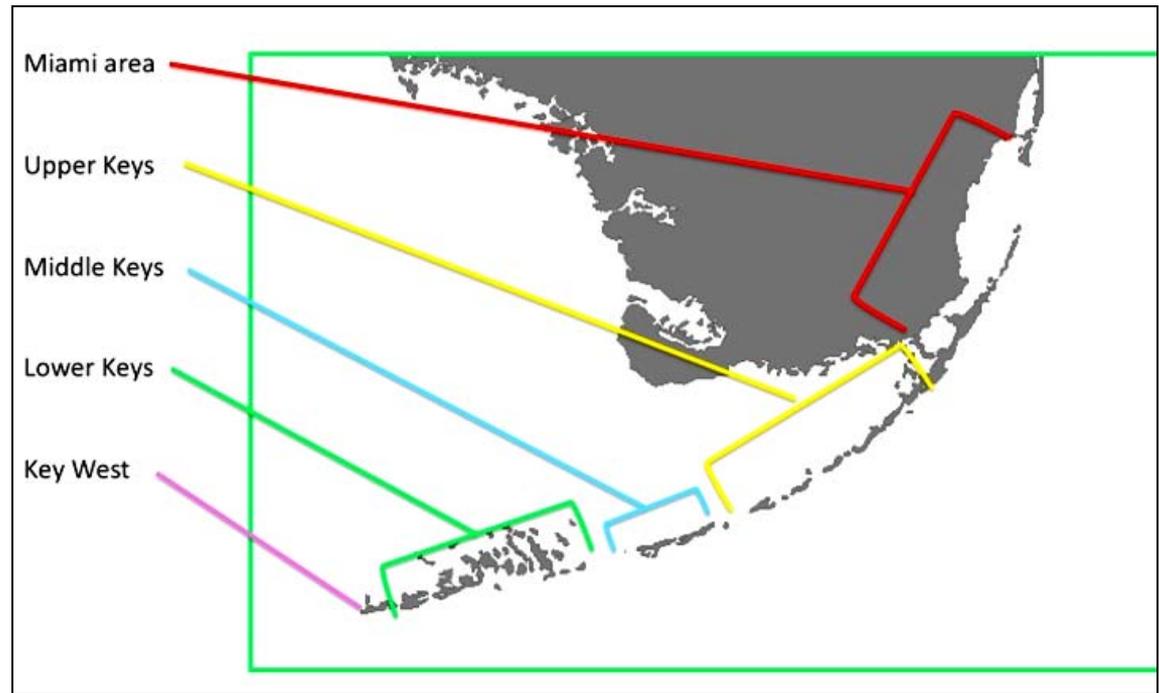
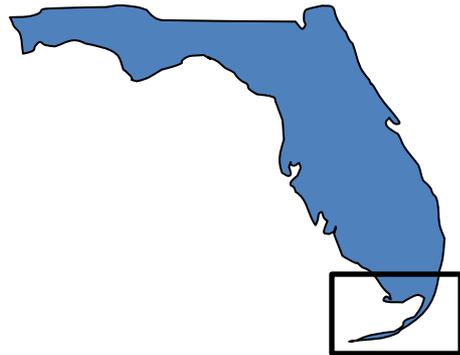
Overview

- Fishery
- Program
- Transfers and Market
- Price Analysis and the Interviews
- Lessons



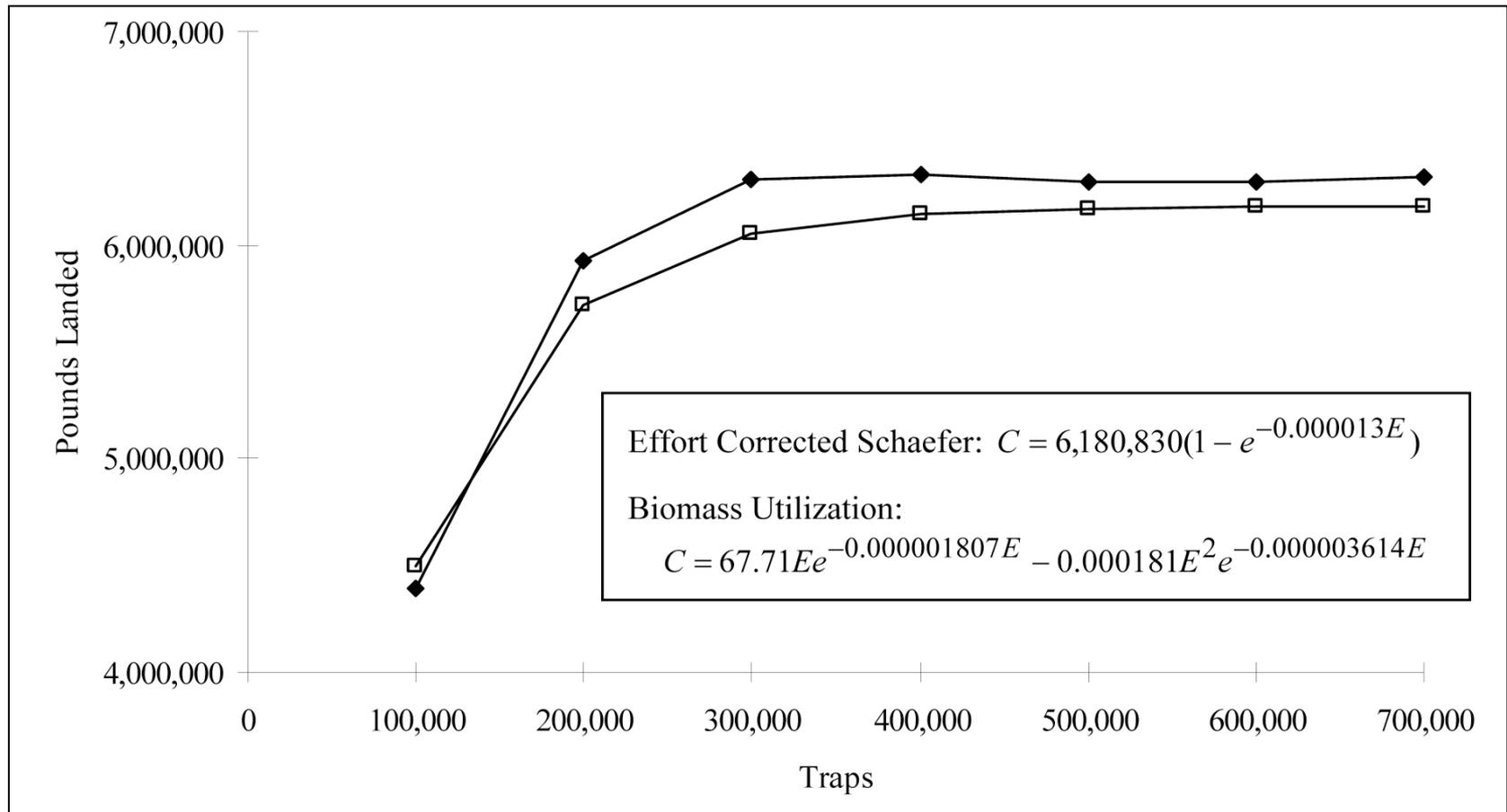
Panulirus argus

Background



- Geographical variation
 - Fishing behavior
 - Ethnic/cultural
 - General economies (fish houses, alternatives, etc.)

Catch-Effort Relationship



Larkin et al. 2001

Trap Certificate Program

- **Implemented in 1993**
- **Goal: reduce trap numbers**
- **Mechanisms:**
 - Allocation based on landings
 - 1 certificate = 1 trap
 - Active and passive reductions
- **Key Elements:**
 - Transferability
 - Cap on shares
 - Fee Exemptions



Transfer Data

- Quantity exchanged and price
- Year
- Name and address of buyer and seller
- Type – A1, A2, or B
- Social Network Analysis

The lobster trap certificate program and data collection managed by **Florida Fish and Wildlife Conservation Commission (FWC)**

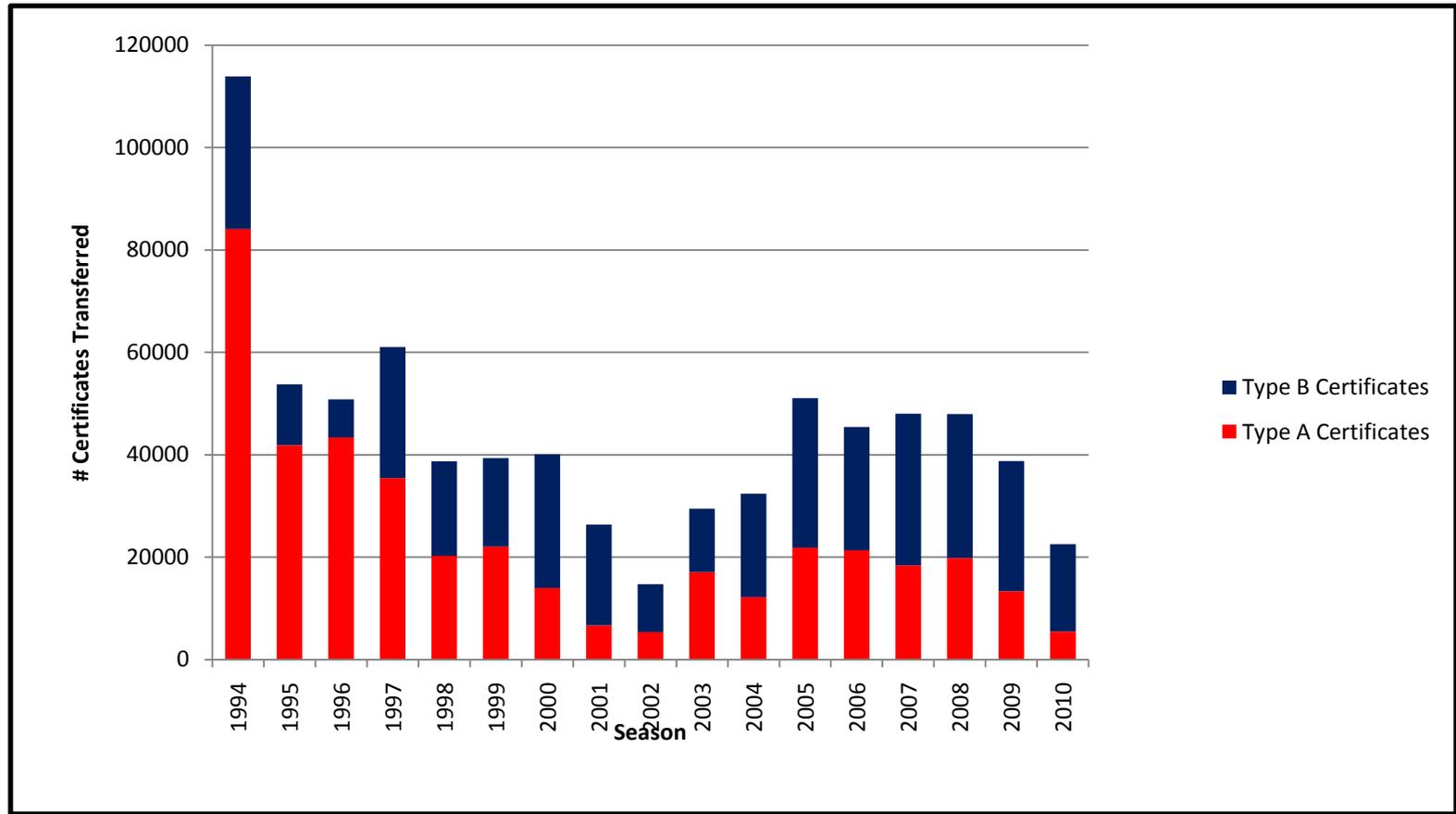


Certificate Transfers

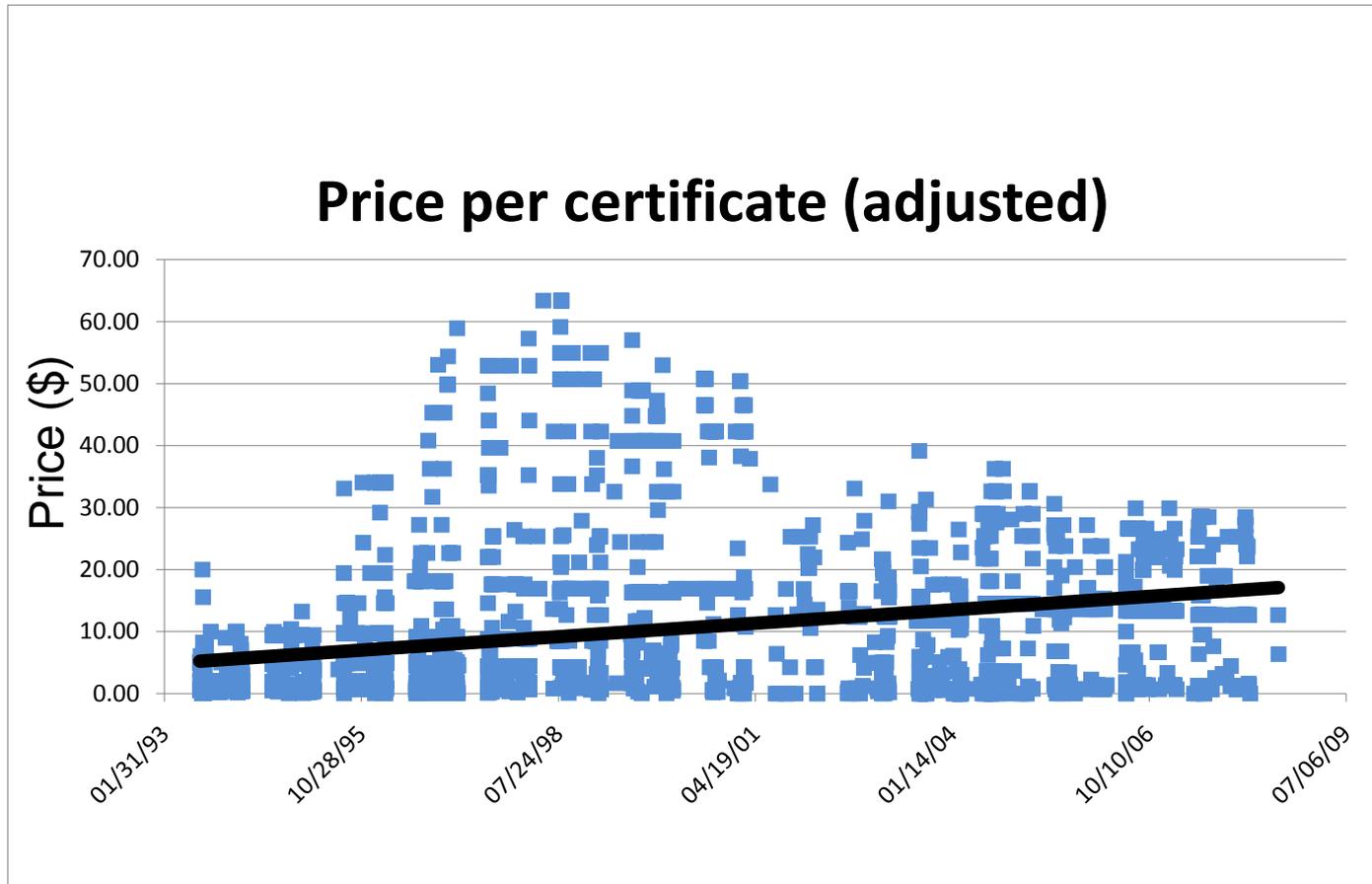
2,402 transactions involving 749,368 certificates

Prices were \$0.10 to \$99

Sales of 1 to 3,798 certificates



Price Analysis



What factors influence price?

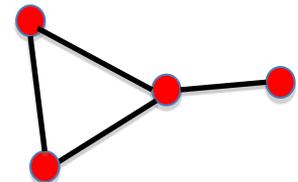
Estimation Model

14 Variables

Constant= \$9.77

12 Variables Significant
(ten $p < 0.01$, two $p < 0.05$)

- Year
- Type of certificate
- Reductions
- Intra-regional trades
- Latino/non-Latino
- Constraint (Network Measure)
- Brokers



WLS Regression Results

Variable	Significant Coefficient
Intercept (real price in 1994) *	\$9.77
Time trend (0 = 1993-94, 14 = 2007-98)*	\$1.12
Certificate type A2 (2%)*	- \$6.76
Certificates type B (33%)*	\$6.67
Quantity of certificates exchanged (100s)*	- \$0.62
Small transaction (quantity ≤ 10)	\$2.13
Large transaction (quantity $\geq 1,000$)**	- \$2.60
Interaction of quantity exchanged and large	\$0.52

* $p < 0.01$

** $p < 0.05$

N = 2,246

R² = 0.40

Regression Results cont.

Variable	Significant Coefficient
Active reductions (1993-1995, 1998)**	\$1.67
25% passive and \leq 4% active red. (2001-04)*	- \$2.70
Buyers and sellers live in same region (47%)*	- \$3.82
Buyers and sellers are same ethnicity (81%)*	- \$3.74
Difference in 'constraint' (buyer – seller)*	\$4.08
Seller is a broker (1%)*	\$20.07
Buyer is a broker (10%)*	- \$10.14

* $p < 0.01$

** $p < 0.05$

N = 2,246

R² = 0.40

Into the Field

- 50 interviews
- Half Latino, half non-Latino
- New entrants, former fishermen, many transfers, few transfers or none

Interviews

- Semi-structured
- Specific transactions
- Market information



Certificate Type

Certificate type A2 (2%)*	- \$6.76
Certificate type B (33%)*	\$6.67

Hypothesis: If the certificate was obtained by seller from a family member, re-sale will be lower

Interviews: It's all about the fees- "taxes"

- 25% or \$5/ certificate, whichever is higher
- Buyers and sellers prefer B certificates

Reductions

Active reductions (1993-1995, 1998)**	\$1.67
25% passive and \leq 4% active red. (2001-04)*	- \$2.70

Hypothesis: Active reductions put seller at advantage (higher price), passive reductions put buyer at an advantage (lower price)

Interviews: Active reductions are an advantage for sellers—buys were unavoidable for most professional fishermen.

Buys during passive reductions are avoidable.

With passive reduction, buyer takes the loss and this does not affect the price.

Social Ties

Buyers and sellers live in same region (47%)	- \$3.82
Buyers and sellers are same ethnicity (81%)	- \$3.74

Hypotheses: Lower transaction costs for transfers between two people in the same area or of same ethnicity will lower the price of the certificate.

Interviews: When buying or selling, fishermen use social networks first; prefer to buy/sell from someone they know.

Details about transactions= typically close ties in the community

Brokers

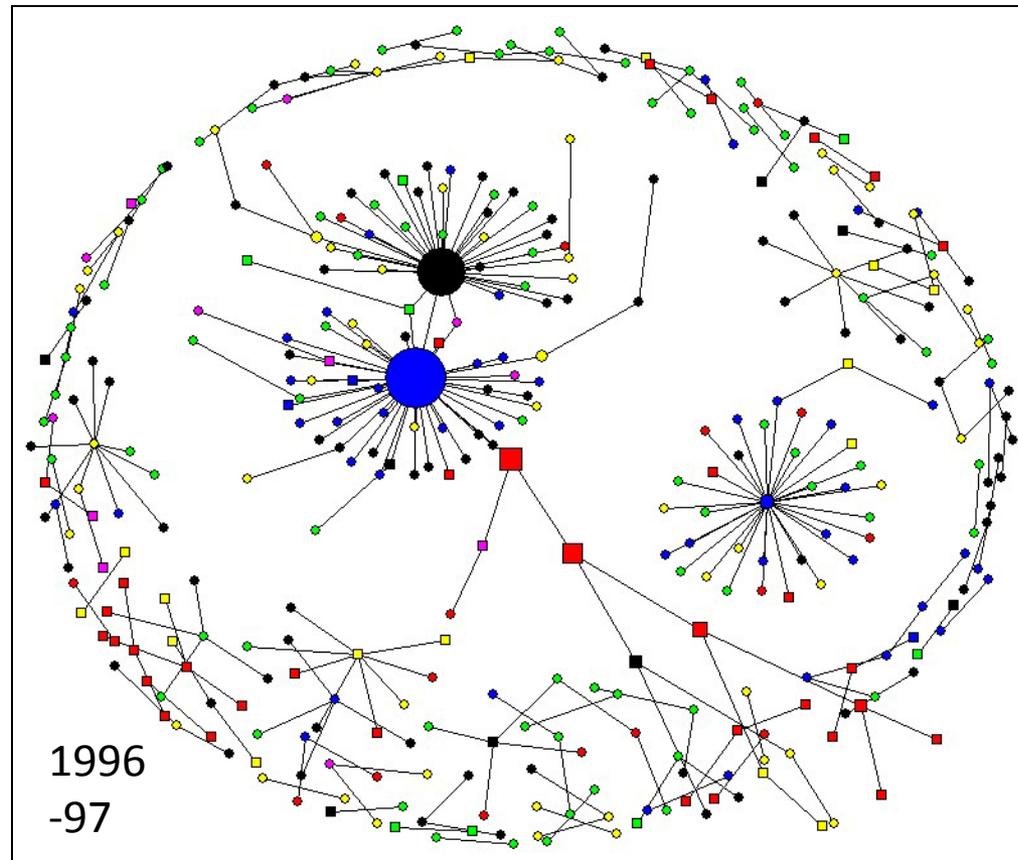
Seller is a broker (1%)	\$20.07
Buyer is a broker (10%)	- \$10.14

Hypothesis: Buying from a broker raises the price, selling to a broker lowers the price.

Interviews: Brokers were easy to find; could accommodate specific number of certificates and charged a fee.

Brokers cont

- Mostly active between 1998-2002
- Price increased along with leasing
- Most brokers left when leasing was banned in 2002.
- Consolidating effort



Information about Transfers

- Fishermen remembered almost all details
- Most common reasons for buying:
 - make up for a reduction
 - entering fishery or increasing operation size
 - opportunity
- Common reasons for selling:
 - exiting
 - downsizing
 - needed money
 - certificate holder passed away



Information about the Market

- How to buy or sell:
 - utilize social contacts first- “spread the word”
 - place or answer an ad in the newspaper
 - brokers
- Balancing
 - preference for one sale, but will accommodate
 - depends on how many the buyer wants and how many the seller has
 - brokers always supply specific amount
- Haggling over price
- Financing common among friends and neighbors
- Some group purchases

Conclusions and Lessons

- Program Provisions (fees, reductions) affect market for trap certificates
- Social ties make the market work
- Brokers play important role
- Trades have function beyond moving effort, increasing efficiency
- Interviews helpful in validating the results

QUESTIONS?

Kari MacLauchlin
kari.maclauchlin@noaa.gov



The Keynoter, July 1998

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SNA Visualization of Transfers

