



Fish markets and marketing

Value Chain course for Senior Fisheries Officers in the CRFM States

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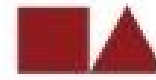
What makes a resource valuable?





What is fishing?

- Fishing is an economic activity aimed at satisfying the wishes of consumers to consume fish
- Fish is heterogeneous with a number of attributes
- Consumers have preferences for attributes and the value of fish is to a large extent determined by its attributes
- Valuable attributes are directly related to the concept of quality



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Special issues regarding fisheries

Standardization of food supply but limited output control in fishing

- Fishers have limited control over some of the attributes of their catch.
- The fisher is able to influence his expected catch by choice of gear, fishing ground and time.
- He can improve his control with investment but catch is determined by nature
- This lack of control has made the industry historically more supply than demand driven.



Special issues regarding fisheries

Tragedy of the commons

- The price consumers are willing to pay for the fish exceeds marginal harvesting cost at the socially optimal level resulting in over harvesting
- Leads to loss of resource rent
- Forces governments to regulate harvest
- Supply of fish determined by regulation
 - Fixed or inflexible supply



Special issues regarding fisheries

Catch heterogeneity

- Fish has many different attributes
 - Species
 - Size
 - Freshness
 - Muscle firmness
- Helpful to classify attributes by
 - the fishers control over the attribute
 - the cost of verifying the attribute (measurement cost)



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Special issues regarding fisheries

‘Poor mans protein’ turns health food

- Fish has historically been an inferior substitute for meat.
- Fish is increasingly associated with good health
 - ↑ demand
 - ↑ price since supply is fixed
 - ↑ quality awareness as fish becomes more expensive and exclusive

Standardization of food

- Standardization and consolidation in food processing and retail
- Demands high level of control over production process



Agriculture

- High level of control
 - What, when, how much ...





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Fisheries

- Limited output control
 - catch attributes
 - future catches
- Can control some things
 - What and when each vessel can fish
- Difficult to control other things
 - Tomorrows catches



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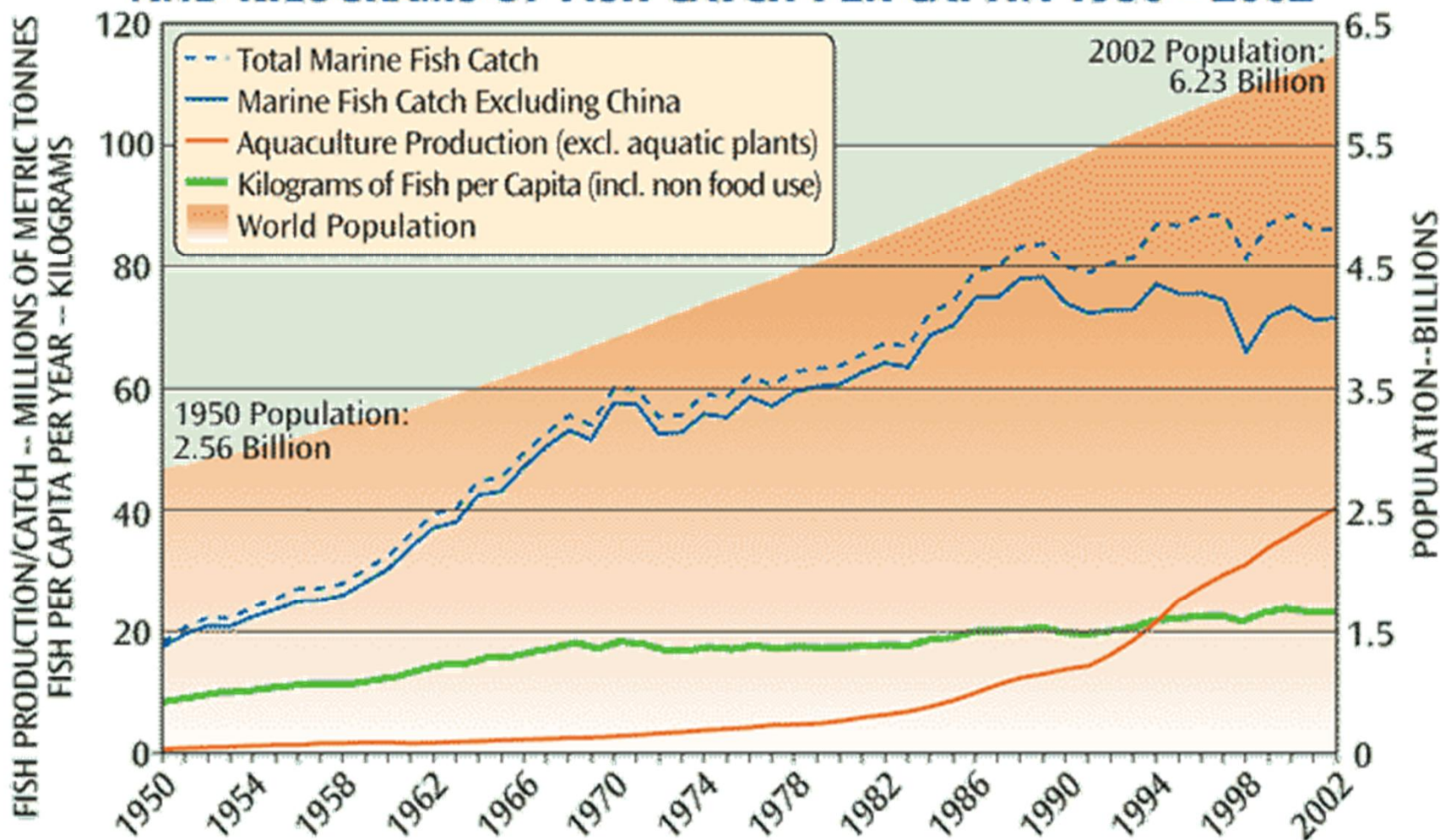
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Other important factors

- International
 - Stagnation in world catches
 - Increased world population
 - Changes in consumption patterns
 - International trade agreements
- National
 - Economic policy
 - Management system
 - Market system

TOTAL WORLD FISHERIES AND AQUACULTURE PRODUCTION AND KILOGRAMS OF FISH CATCH PER CAPITA 1950 – 2002



SOURCE: UN FAO FISHSTAT Database, <http://www.fao.org/fi/statist/FISOFT/FISHPLUS.asp>;
 US Census Bureau, <http://www.census.gov/ipc/www/worldpop.html>



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Global fishing

- Overexploitation
 - Stagnating and declining world catches
- Poor profitability
 - Limited profits in most world fisheries

Why?

What can we do about it?



Common property

- Assets, resources, property held in common by a group of people
 - Held in common = equal rights of use
 - The group can be small (2 people) or large (a nation)
- Examples
 - Ozone layer, atmosphere, the environment, wild animals, **fish stocks**

The common property theorem

Common property will be
excessively used!

(Unless the common holders can somehow coordinate their activities)

Corollary

Net benefits will be less than they could be

One of the most solid theorems in economics
Applies to all property (assets) held in common



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The common property problem is

1. Universal
 - a. It is found all over the world in all sorts of situations
 - b. All common property fisheries exhibit these features
2. There are no counterexamples
 - a. Claimed counterexamples are rare
 - b. They turn out to be some sort of management structures that alleviate the CPP
 - c. Even so they are generally just slightly better than the competitive equilibrium
3. One of the most solid laws of all of economics



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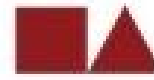


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Designing fisheries management

- Regulation must allow the fishers to respond to incentives
- Restricting responsiveness to incentives reduces the surplus generated by trade
- This should be taken into account when regulating fisheries



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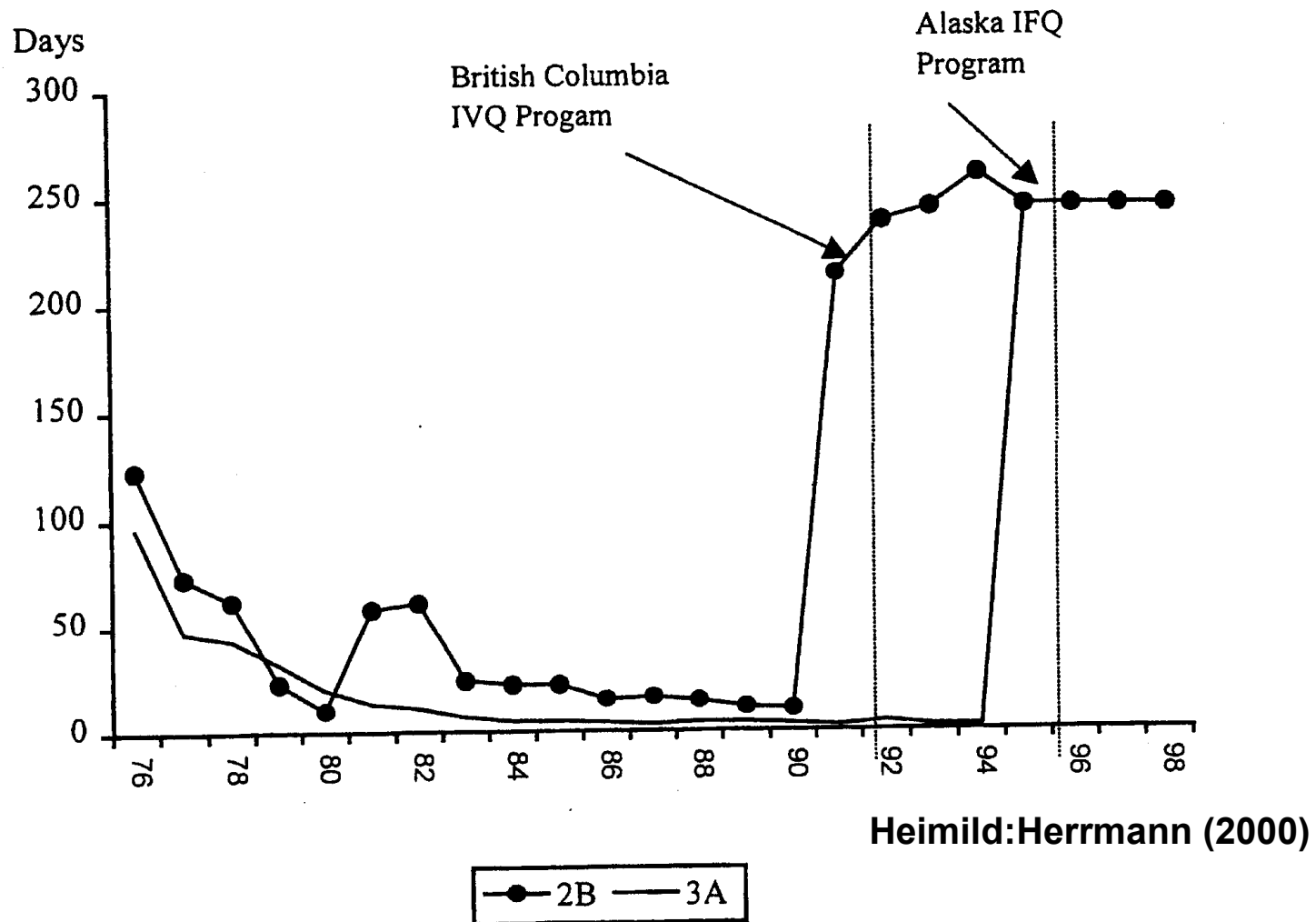
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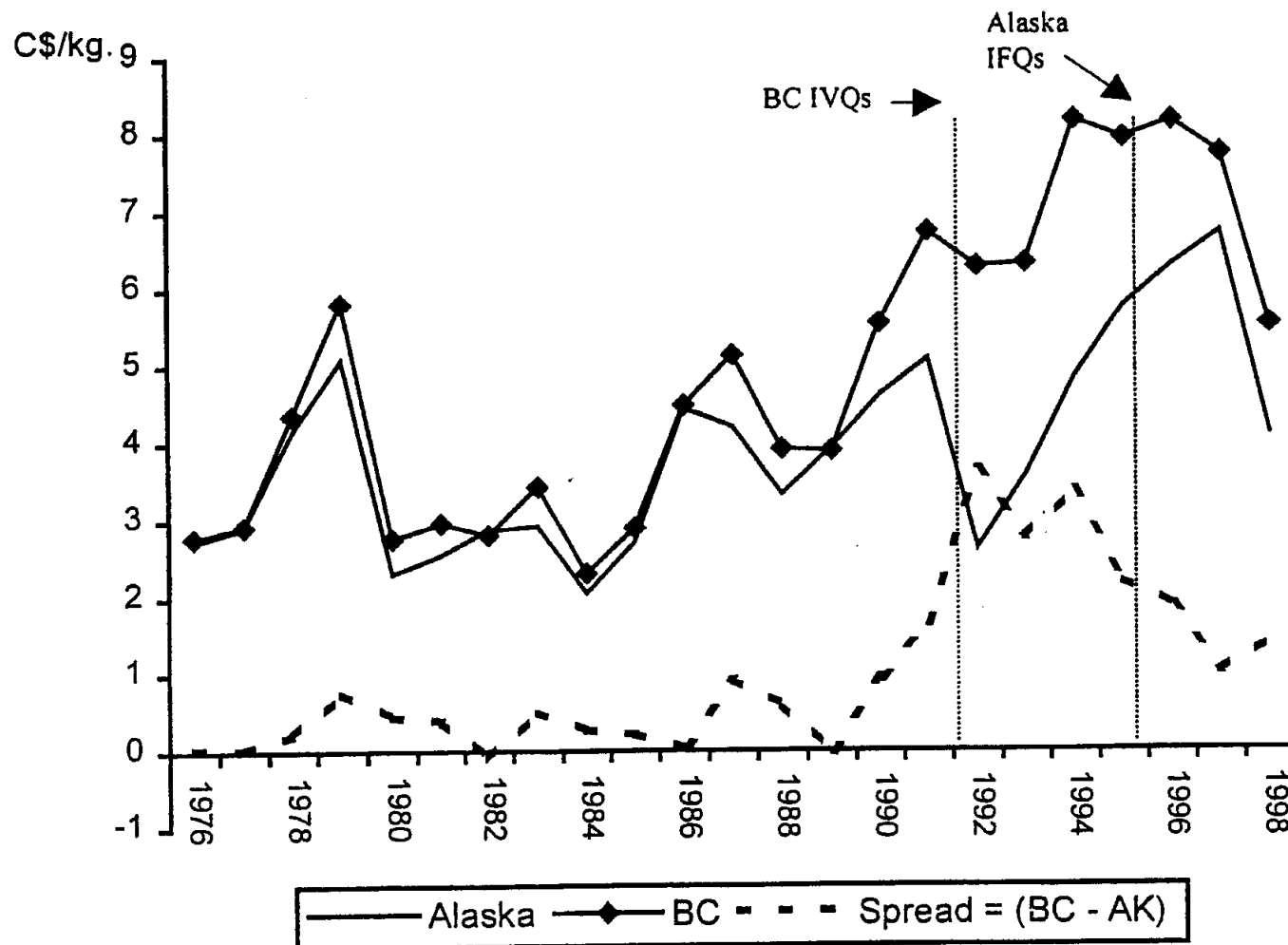
How do we organize profitable fisheries?

- Fisheries management
 - Property rights based system
- Market system
 - Organization of value chains

Natural experiment halibut in Alaska/Canada



Natural experiment halibut in Alaska/Canada

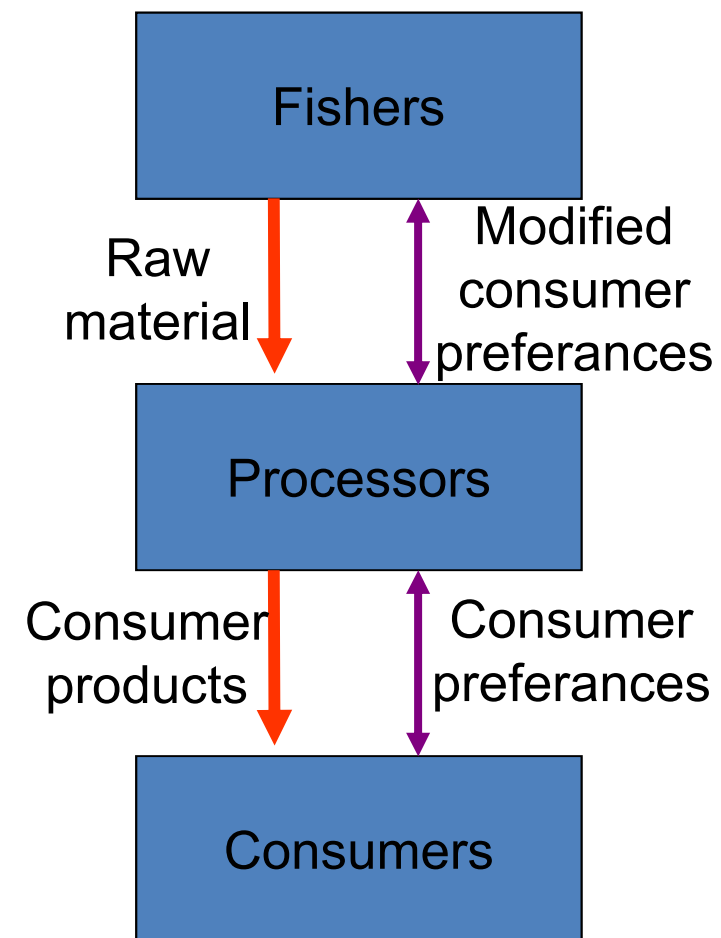


Heimild:Herrmann (2000)

Flow in the value chain

- In theory the market pricing mechanism should pass on information up the value chain from consumers, through processors to primary producers.

The value chain





Importance of unrestricted flow

- Flow of materials and information may become restricted
 - due to the nature of the good
 - due to government intervention
- The results are less efficient value chains that generate less value

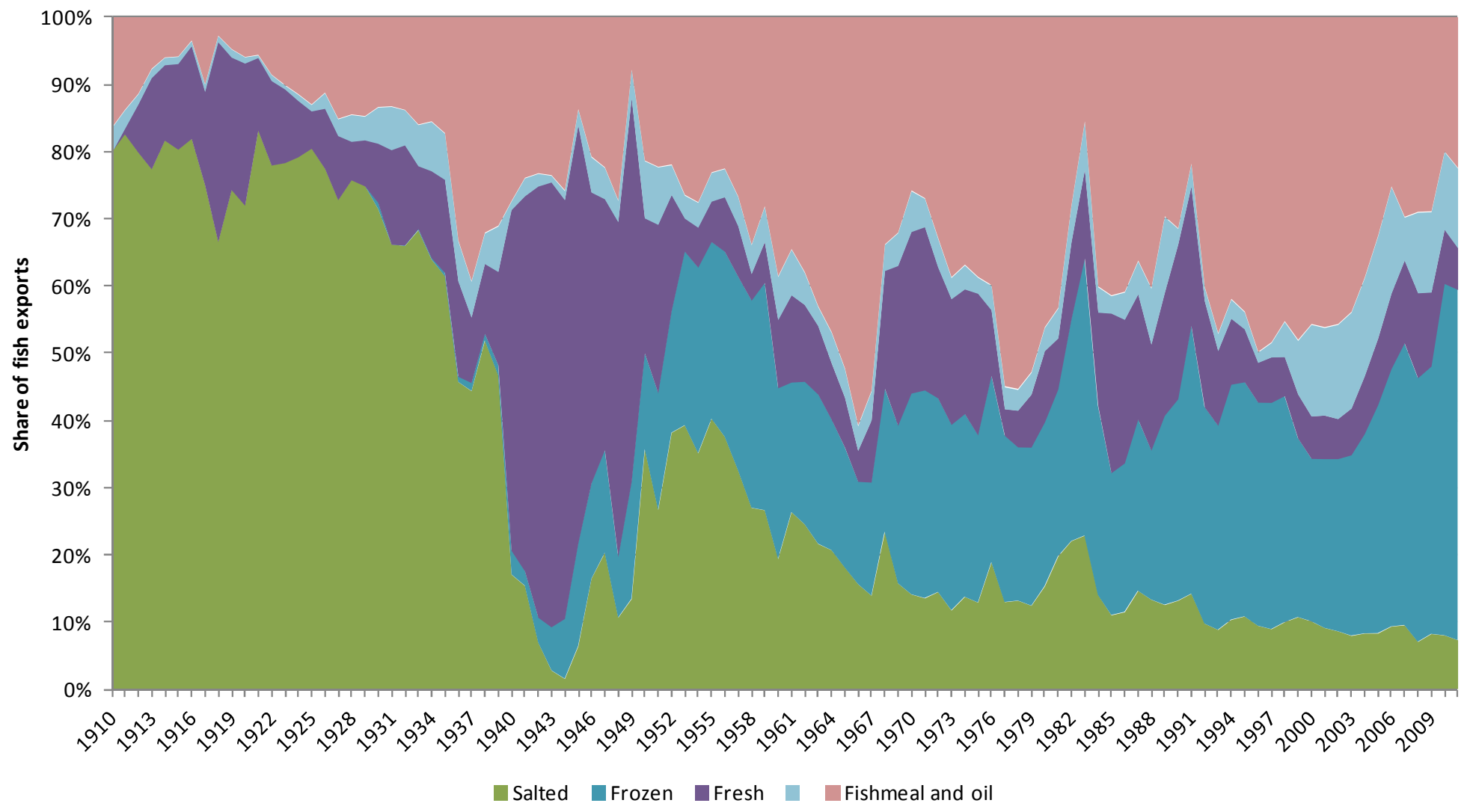


Icelandic experience

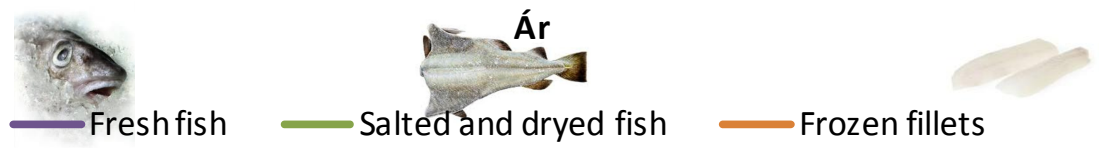
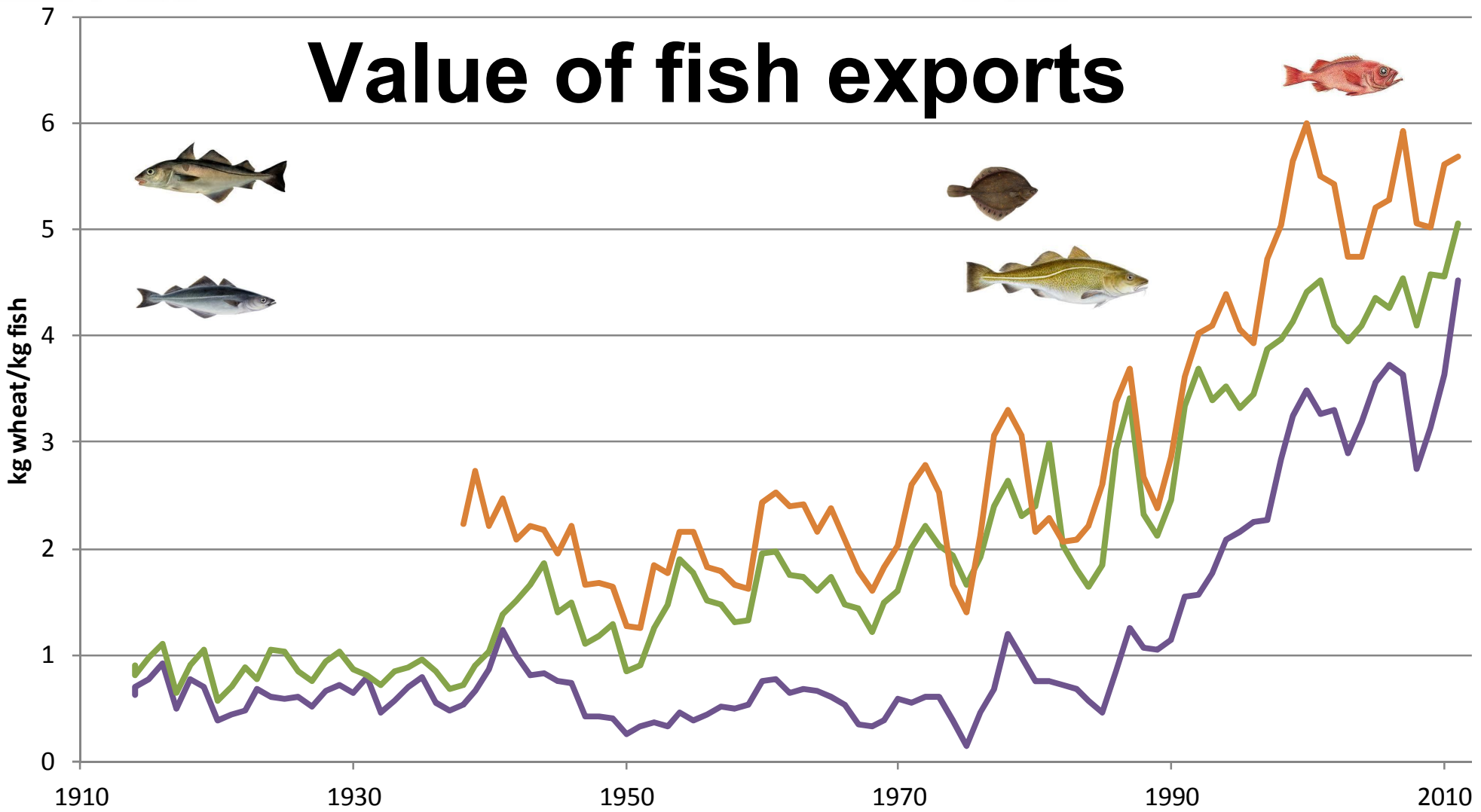
- Profitability incentives in fishing with quota systems
 - The end of the race to fish
- Emphasis on quality
- Innovation
- Understanding of the role of marketing



Export composition



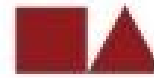
Value of fish exports



(Heimild: Hagstofa Íslands)



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Key factor 1

The ability to respond to incentives

- ITQ system changes fishing
 - Firms maximize profits given quota
 - Creates a strong incentive to maximize value
- Keep in mind that quota is the limiting factor in fishing under ITQ's – the resource rents go to the quota owner



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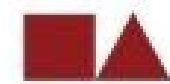
Key factor 2

Fish market organization

- Fish is heterogeneous – attributes determine price
- Consumers have preferences for attributes and the value of fish is to a large extent determined by its attributes
- Key market factors
- Quality awareness
- Year round demand
- Standardization (retail chains) ...



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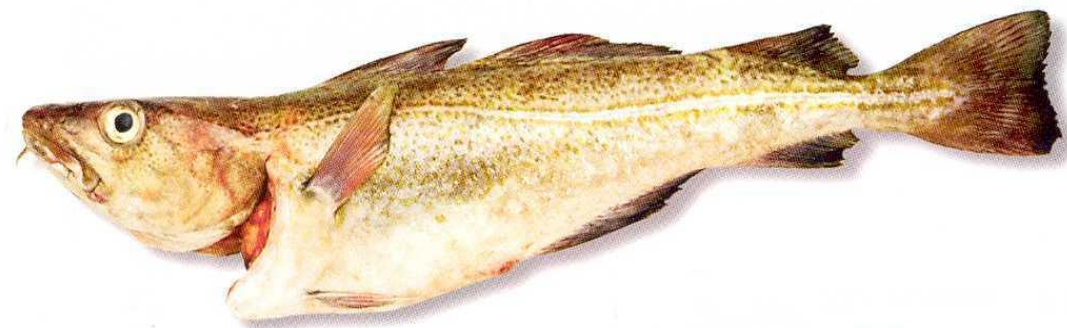
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Freshness - a valuable attribute

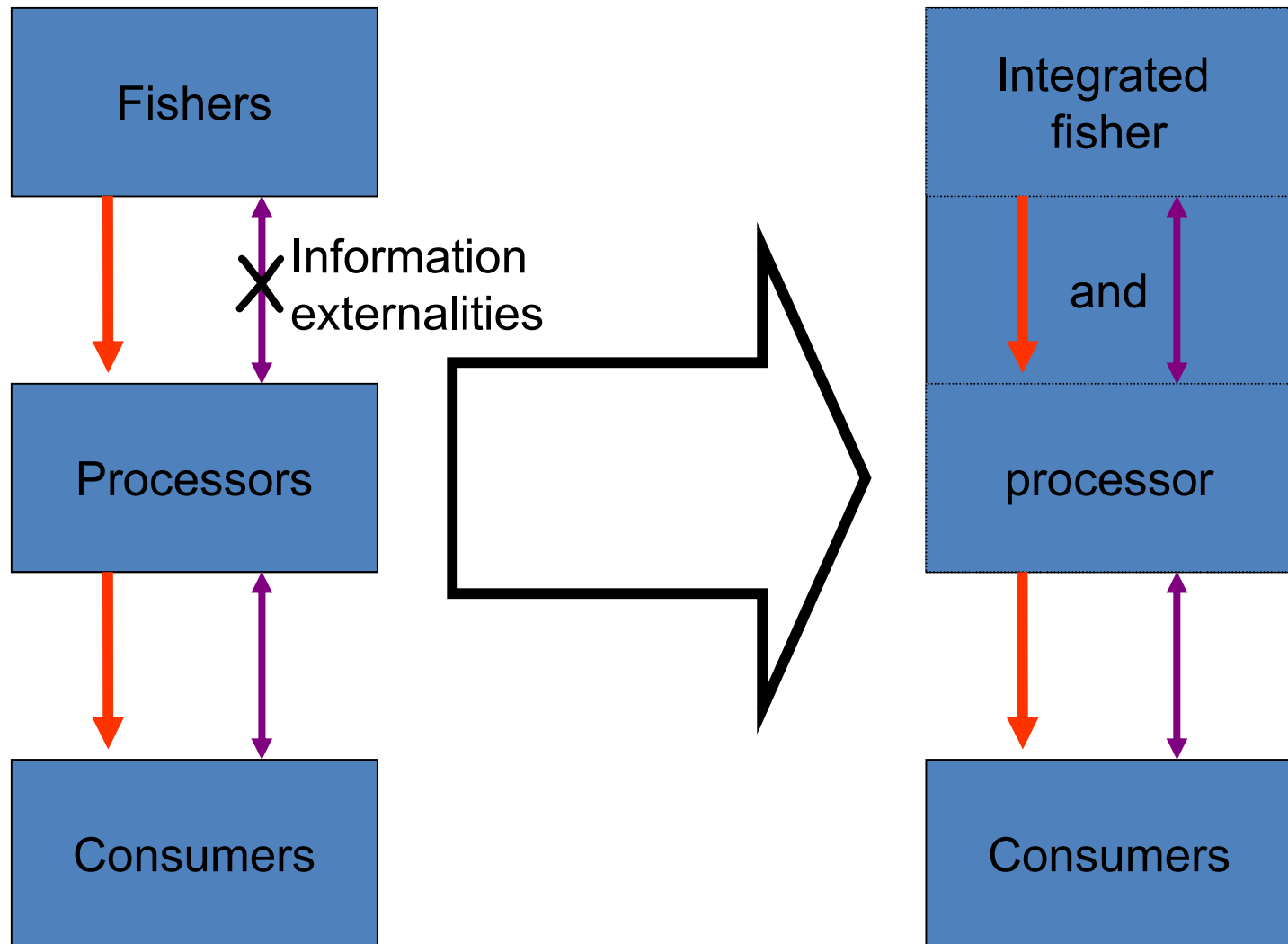


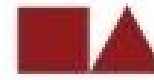


Signaling of preferences

- The consumers respond quantitatively to prices in the consumer market.
- Processors interpret these signals and send modified signals to primary producers.
- This signaling can go through prices or grades and standards in contracts.

Vertical integration





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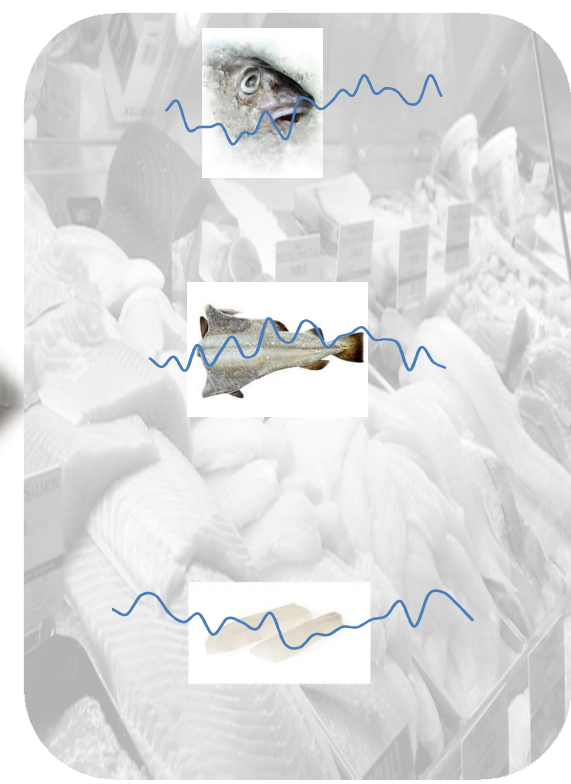
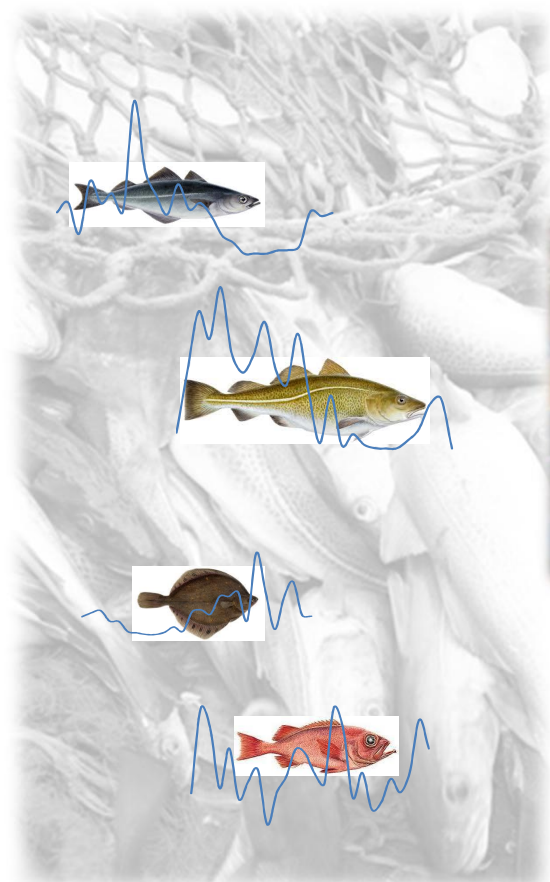
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Information flow in value chains

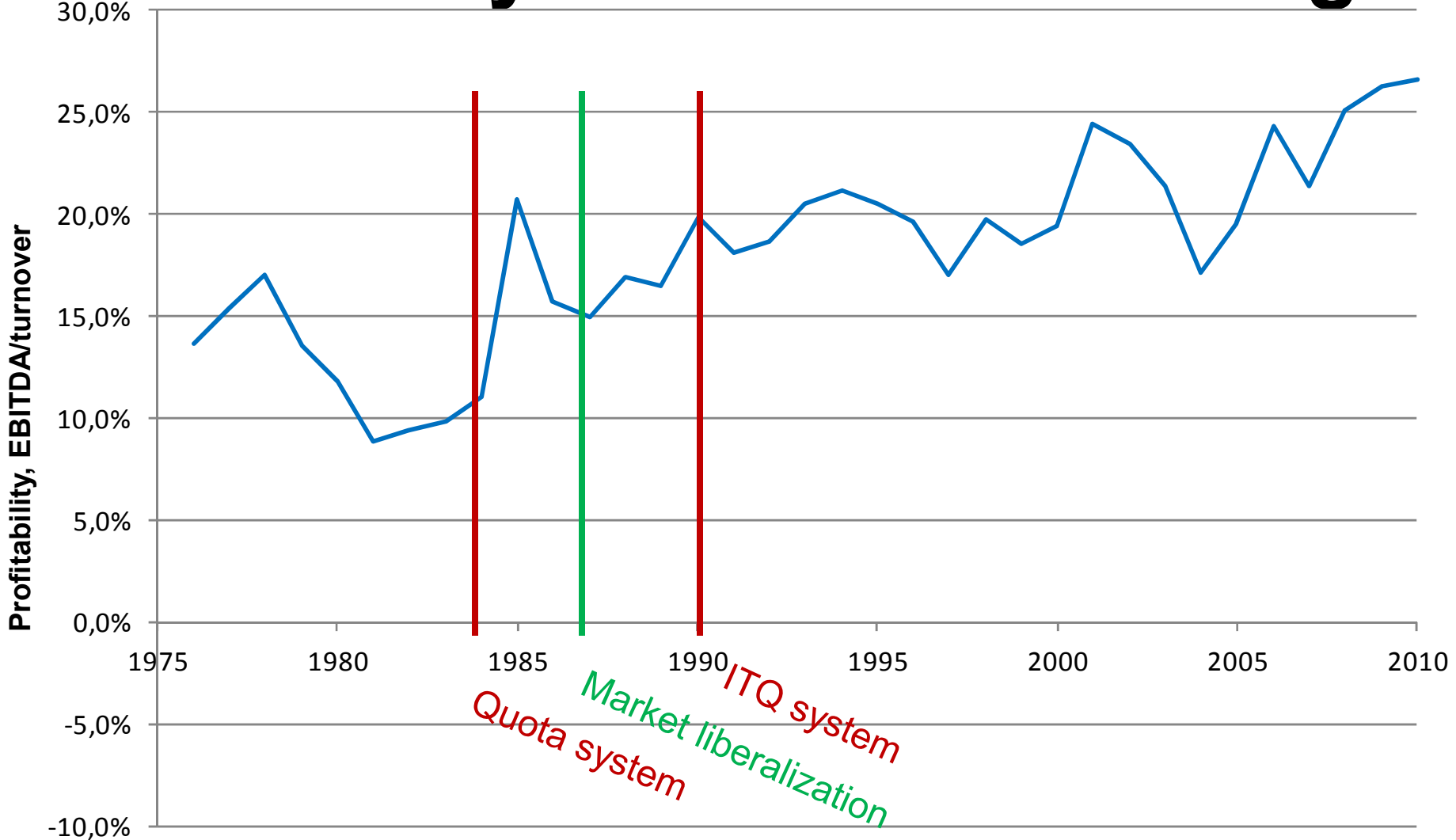
- Markets must convey information on attribute demand through the value chain
- Vitally important that firm can choose the structure that best serves the purpose (e.g. vertical integration)



Fitting a square plug in a round hole



Profitability in demersal fishing

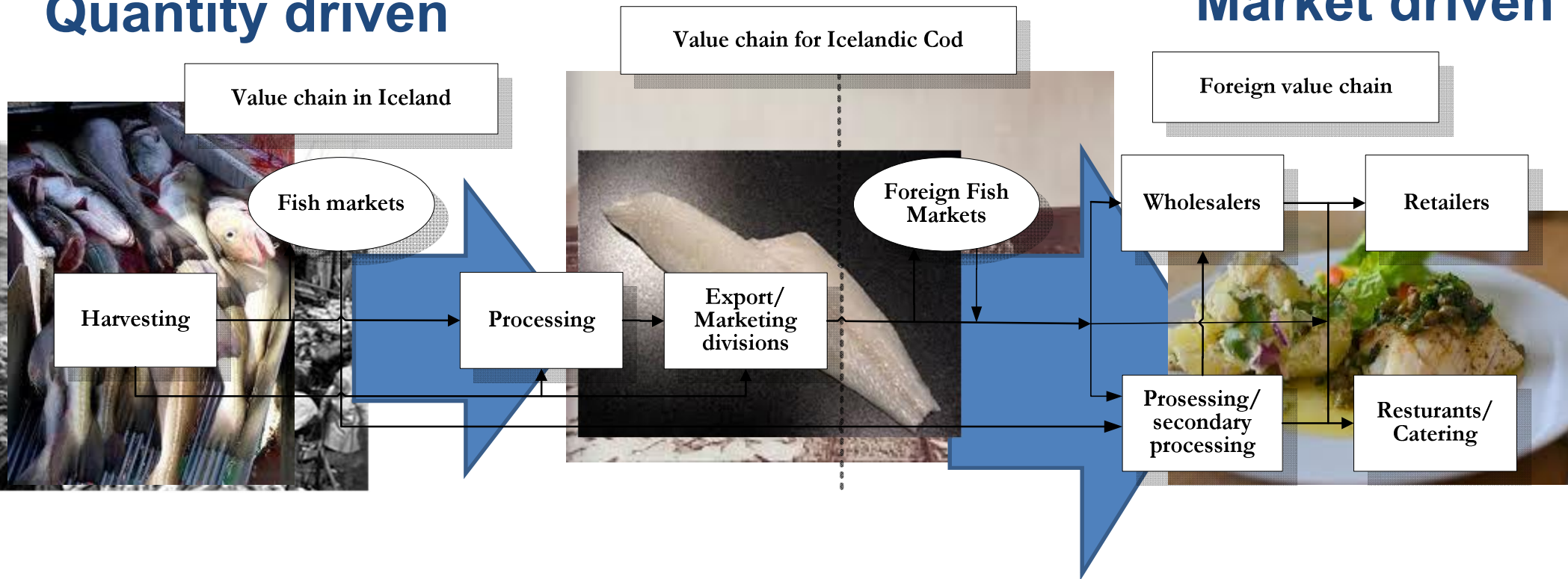


(Source: Statistics Iceland)

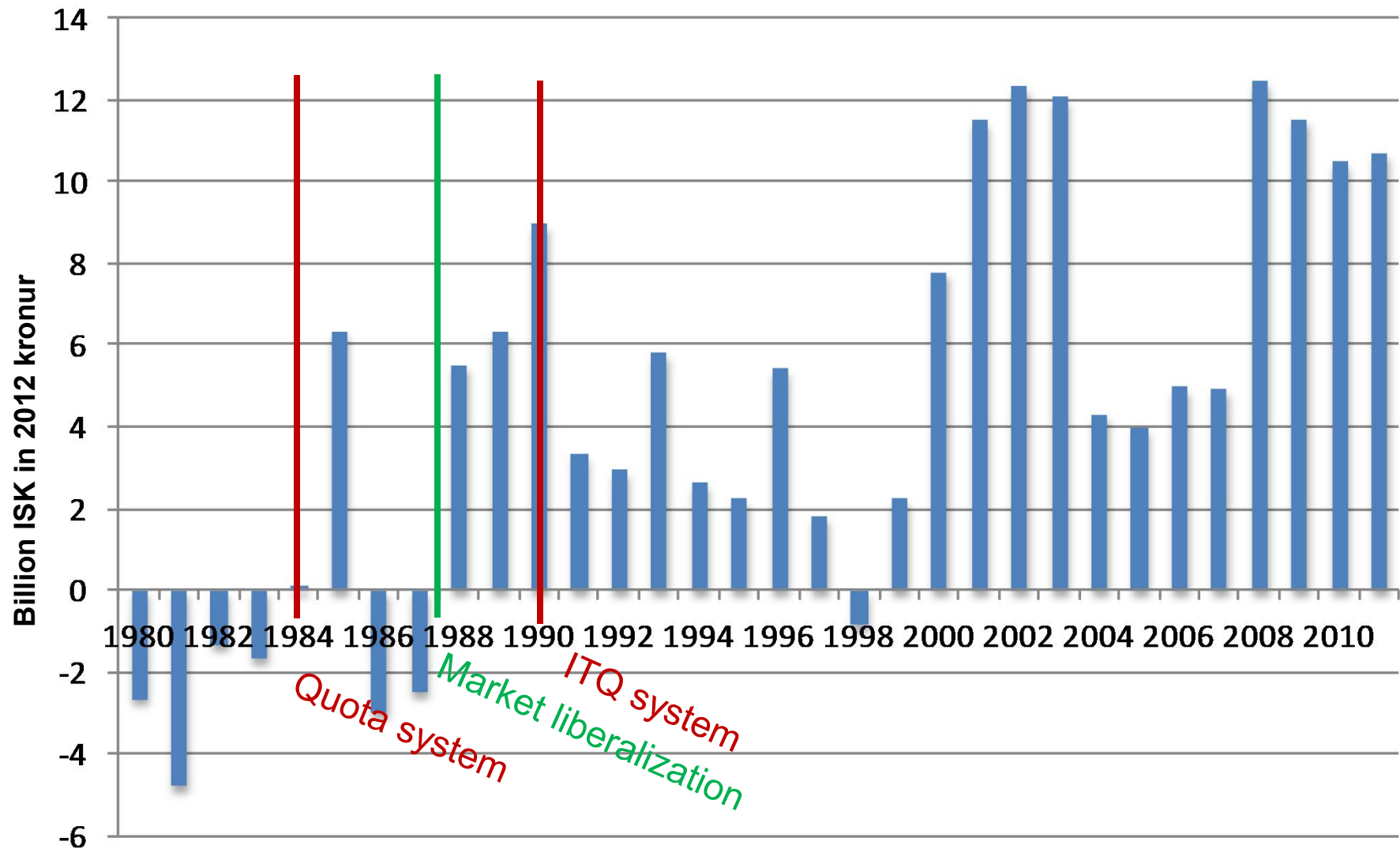
Transformed value chains

Quantity driven

Market driven

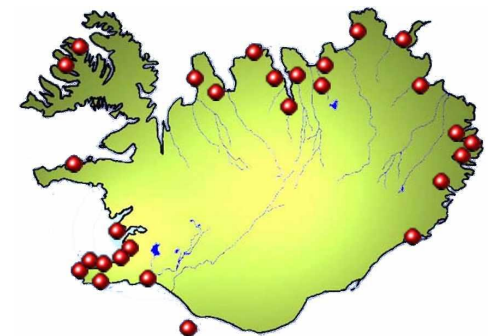
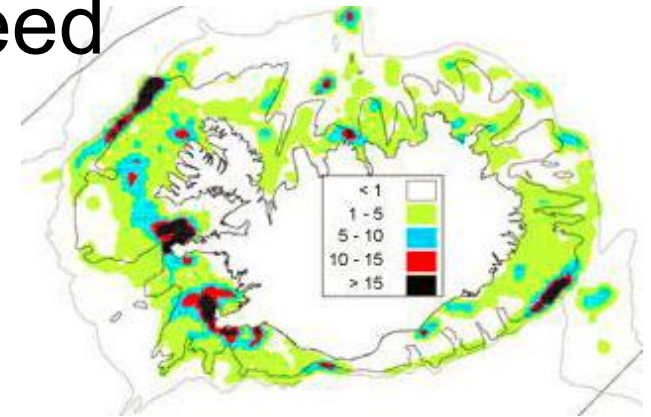


Contribution of market orientation



Changed emphasis

- Quantity driven value chains need
 - Proximity to fishing grounds
 - Large capacity
 - Minimize processing cost
- Market driven value chains need
 - Marketing
 - Product development
 - Quality awareness
 - Maximize profitability





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Changes not without cost

- ITQ's and liberalized fish markets improve profitability but at a cost
- Rural development
 - Uncertainty in rural primary industries affects secondary industries
- Instant millionaires created by quota trade

Relative competitiveness





Conclusions – fisheries management

- Management regulation determines supply and degree of output control
- Regulation must allow the fishers to respond to incentives
- Restricting responsiveness to incentives reduces the surplus generated by trade
- This should be taken into account when regulating fisheries



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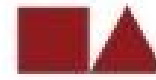


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Conclusions - trade regulation

- Trade regulation determined the ability of a market to deal with information asymmetry
 - Information asymmetry may lead to market failure and oversupply of less valuable attributes
- Market structure must be able to convey information about attributes



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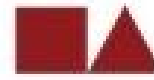


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Conclusions – rural communities

- Fishing is often very important in local communities
- Can be short run negative effects of changes in regulations
 - Consolidation of fishing and processing
 - Fishing moving from between communities
- Important to address to and decide on countermeasures (if any)



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Conclusion

- Market orientation is crucial in value creation in fisheries
- Relies on sound government policy
 - End to the race to fish (quota system in Iceland)
 - liberalized fish markets (information flow)
- Other requirements
 - market focus
 - research and innovation
 - entrepreneurship



One word about the future

- Substantial room for improvements
 - Continuous improvements in technology
- Very important not to weaken the profitability incentives in the current system
- The management system must support long term thinking in harvesting, marketing strategies and innovation



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Another word

- Half the fish for human consumption comes from aquaculture according to FAO figures (about 60 MT from each)
- Aquaculture is farming – where producers have much more control over the production process
- Pressure on value chains will therefore increase
- Marketing plays a crucial role in maintaining position of wild fish



End