

**1) Crew employment – numbers of jobs**

- a. Decreased after IFQ. Substantial consolidation and exodus of vessels following IFQ implementation resulted in fewer crew jobs.
  - i. For many boats, the number of crew per boat also decreased following IFQ.
    1. The lengthening of the fishing season has reduced the pre-IFQ need for “manpower,” i.e. numerous crewmembers to work quickly in a confined season.
- b. Crew jobs have continued to decrease over the last 20 years of the IFQ program
  - i. Decreasing TACs have led to more shareholders consolidating onto fewer boats – bringing their quota on board other shareholders’ vessels – as a way to minimize operating costs.
    1. This is also happening for those who are leasing quota. Lessees are consolidating leased quota onto fewer vessels.
  - ii. Auto-baiters, which have been installed on some IFQ boats, have also eliminated a crewmember position.
    1. On some vessels, auto-baiters are paid for by the crewmembers over time. A percentage of their crew share goes to paying off the auto-baiter.
- c. For the Deep Sea Fishermen’s Union, for which these numbers are available, there were 175 crewmembers on 37 vessels in 1994 and in 2015 there were 61 crewmembers on 12 vessels.
  - i. Others estimated that overall crew jobs decreased by 50% to 70% since IFQ.
  - ii. The DSFU is the only union of crewmembers in the IFQ fleet. It operates under an agreement - the Set Line Agreement - with the Fishing Vessel Owner’s Association. The Set Line Agreement dictates how crew shares will be estimated. First, the boat share is deducted from gross revenues, then expenses (ice, fuel, bait, and groceries) and the crew divides the remainder.

**2) Crew shares – the percent of the vessel’s revenue that the crewmember receives**

- a. Prior to IFQ, there was a boat share, captain share, and crew shares. For many operations, operating costs were deducted off the top and then the boat, captain, and crew shares were split from the remaining revenue. For some operations, boat shares encompassed the operating costs as well. For others, bait and fuel costs were deducted from gross revenues and the crew would split the costs of food.
  - i. During the pre-IFQ halibut and sablefish fisheries, crewmembers were making 9% to 15% of gross ex-vessel revenues.
    1. This was the percentage going to each crewmember.
- b. Since IFQ implementation, a variety of scenarios have emerged based largely on whether the participant is an initial recipient of QS, has acquired additional QS, or largely operates as a hired skipper/lessee.
  - i. There is variation in experiences with respect to whether lease fees are deducted for initially allocated QS.

1. Some initial QS recipients do deduct lease fees from gross revenues for their initially allocated QS, while others do not.
  - a. For those who do not apply a lease fee, crewmember shares are equivalent to 8% to 20% of ex-vessel revenues.
  - b. For those who do apply a lease fee for initially allocated QS, these initial fees were about 15% to 30%. So, this percentage was deducted from gross revenues. The operating costs and boat, captain, and crew shares were then estimated from the remaining 70% to 85%.
- ii. For purchased QS, lease fees are deducted from gross revenues.
  1. Lease fees have been growing over the 20 years of the IFQ program.
    - a. A standard lease fee is now 50%/50% or 60%/40%. In other words, 60% of the revenue goes to the shareholder and 40% goes to the lessee.
  2. For those participants who have both initially allocated QS and purchased QS, crewmembers may be making 6% to 15% of gross revenues.
  3. For operations that are strictly hired skippers or lessees, the crew shares are about 3% to 8% of gross revenues.
- iii. Some operations have also increased the boat share, without any relationship to lease fees.
  1. For example, under the DSFU's Setline Agreement, the boat share went from 32% to 40%.
- iv. Under all of these different scenarios, crew shares (as a percent of gross revenues) have decreased since IFQ implementation.

### **3) Average earnings**

- a. For those remaining in the fishery, average earnings have increased substantially for many crewmembers since IFQ implementation.
  - i. For some, earnings nearly quadrupled from 1994 to 1995.
  - ii. For those remaining, the earnings are high enough that people do not want to leave. (The average age of a crewmember in the DSFU is ~55).
  - iii. However, the length of the IFQ seasons has increased. So, crewmembers are making more in the IFQ fisheries, but are out at sea longer. Nevertheless, participants noted that earnings are likely greater on an hourly basis accounting for the elongation of the fishing seasons.
  - iv. Average earnings may actually be lower for crewmembers who are on vessels that have lower profit margins because they are operated by those who operate strictly as hired skippers or only take on walk-ons (i.e. do not have any of their own QS)

### **4) Bargaining power**

- a. Overall the bargaining power of crewmembers has decreased since IFQ implementation because of the lack of available crew jobs.

- b. There is some bargaining power that has been retained by highly skilled crewmembers. There is a lower litigation risk for higher skilled crew. Litigation can also increase insurance costs.
- c. Another bargaining chip for crewmembers is bringing QS on board.
- d. Other bargaining chips include being stable, showing up on time, passing a drug test.
  - i. Even in the face of a shortage of crew jobs, it is still difficult to find good crew.

**5) Fishing season**

- a. The fishing seasons for IFQ crewmembers have increased since IFQ implementation. Fishing seasons are now similar to seasons during the 1980s.
- b. These seasons may also be prolonged by the vagaries of vessel owners, who may want to stretch the season out over a longer period of time, and of walk-ons, who bring their IFQ on the boat and may therefore dictate when they fish.
- c. Longer fishing seasons have actually decreased the capacity of some female fishermen to participate in the IFQ fisheries, as they cannot be away from their families for that long.

**6) Safety**

- a. There have been considerable safety improvements in the IFQ fleet.
- b. The lengthening of the fishing season has allowed participants to operate more safely in the fisheries.
  - i. Fishermen can now pick safer weather windows for going out to sea.
  - ii. Tangled gear used to be a problem as participants were setting and hauling gear on the same grounds and at the same time.
  - iii. The speed element for hauling gear has also changed, so that participants no longer need to haul gear excessively fast.
  - iv. One of the big driving factors has been an increase in the amount of sleep that IFQ fishermen get. During the derby days, the season was so short that fishermen barely slept, if at all.
- c. Not all of the safety improvements may be attributed to the IFQ program, because since IFQ implementation, there have also been a lot of Coast Guard efforts to improve safety in the IFQ fleet. Furthermore, there is a lot more knowledge about safe fishing practices in the fleet.

**7) Entry opportunities**

- a. Incentives
  - i. As a crewmember, you have an incentive to buy QS and bring IFQ onto your boat.
    - 1. You make more money from having your own IFQ and it provides an incentive to have you on the vessel.
  - ii. You can purchase QS and not have to be a vessel owner. So the capital investment shifted somewhat, from vessel to QS. Although to be fully independent now an IFQ fishermen needs both a vessel and QS.
    - 1. Others have adopted a strategy of just owning a vessel and acting as hired skippers or bringing on walk-ons.
- b. Capacity

- i. At the start of the IFQ program, some vessel owners helped their crewmembers buy QS by co-signing for the loan. The QS was relatively affordable and the vessel owners had an incentive to have more IFQ on their boats.
  1. Many of the crewmembers that were helped in this way ended up setting up their own operations.
- ii. With decreasing TACs and rising QS prices, new entry has become much more difficult.
- iii. Many new entrants now have to start by participating in State fisheries and then trying to build up the capital to be able to buy into the federal fisheries.
- iv. Loan down payments have also increased making entry more difficult.
- v. Increasingly, regulations and external costs are factors that mitigate entry, including:
  1. Observer fees or electronic monitoring costs
  2. Coast Guard safety regulations and the equipment necessary to meet those regulations
  3. Management costs and recovery.
- vi. There are also other risks to consider – the biology of the stocks and changing management regimes in other fisheries that would affect the IFQ fisheries (e.g., charter sector allocations, bycatch).