Short communication
Ignoring market failure in quota leasing?

Evelyn Pinkerton a,*, Danielle N. Edwards b

a School of Resource and Environmental Management, Simon Fraser University, 8888 University Drive, Burnaby, BC, Canada V5A 1S6
b Blue Mosaic Inc., P.O. Box 586, Ucluelet, BC, Canada V0R 3A0

A R T I C L E   I N F O

Article history:
Received 1 January 2010
Received in revised form 12 January 2010
Accepted 12 January 2010

Keywords:
Quota leasing
ITQs
Halibut
Multiple objectives

A B S T R A C T

This short communication is, in part, a response to the Bruce Turris’ rejoinder (Marine Policy...2010) to Pinkerton et al., The elephant in the room: The hidden costs of leasing individual transferable fishing quotas (Marine Policy, July 2009). In responding to this article on the unacknowledged problems of unregulated and even unrecorded leasing of individual transferable fishing quotas (ITQs), Turris illustrated the point of the original article well by minimizing the status of leasing as a major influence leading to problems with the fishery: an elephant in the room. Turris focused instead on relatively small and less relevant details, misrepresented the argument, and largely ignored or skirted our discussion of the absent structural conditions important for open competition and efficient outcomes. This response addresses several of his concerns, elaborates on some of the initial points in the original article and contributes some new ones.

© 2010 Elsevier Ltd. All rights reserved.

1. Introduction

The most notable feature of Bruce Turris’ rejoinder [1] to our article “the elephant in the room: the hidden costs of leasing individual transferable fishing quotas” [2] is that it does not address our central point. Our discussion focused on the largely unstated assumptions made by individual transferable quota (ITQ) advocates concerning the conditions necessary for halibut ITQs to be bought, sold, or leased in open competition as was intended in order to achieve economic efficiency. It showed that these conditions were not present in the BC halibut fishery. The economic theory implicitly used by these advocates holds that for a quota market to function well and produce efficient outcomes a number of conditions must exist. These conditions are discussed in detail in [2], and include the conditions that:

1. There are no wealth or income effects arising from the initial allocations of quota: to assert that this condition exists in the halibut fishery, one has to believe that fishermen who were gifted quotas in 1991 when the program started cannot pay higher prices to lease additional quota, putting new entrants into the leasing market and owners of small amounts of quota at a disadvantage.
2. There is equitable access to capital: to assert that this condition exists in the halibut fishery, one has to believe that processing companies, brokers, existing quota holders, and outside investors do not have more access to capital in competing for leases with fishermen who own little or no quota.
3. Accurate and timely information sharing occurs between and amongst lessees and lessors of quota: to assert that this condition exists in the halibut fishery, one has to believe that there is reliable information available on quota leases and that this information is available when the lessee is in the position to lease quota.

While it is understood that no market functions perfectly, the degree to which a market is functioning is largely dependent upon how well these structural conditions are met. Our paper documented the almost complete failure of the BC halibut fishery to meet these conditions, and the resulting market failure preventing the achievement of efficiencies that are presumed to go hand in hand with ITQ systems. A response that acknowledged or addressed these underlying fundamental conditions would have advanced the discussion, since it is difficult to improve a situation if one does not first acknowledge the nature of the actual problems.

Although Turris distances himself from the more extensive claims of other evaluators [3] about the benefits of ITQs, claims which we had critiqued, he ignores our discussion of the importance of these conditions and discounts the ethnographic

* Corresponding author.
E-mail addresses: epinkert@sfu.ca (E. Pinkerton),
dnedwards@telus.net (D.N. Edwards).

1 Particularly as expressed in the so-called “Coase theorem”.

2 Turris agreed that there was unequal access to capital for young people, acting as a barrier to entry into the fishery, but beyond attributing this to the unwillingness of banks to treat quota as security against which loans can be guaranteed, he did not acknowledge how this has impacted the functioning of the quota trading market.
research which revealed their absence. Perhaps some of Turris’ lack of understanding of our findings results from poor communication across disciplines that use qualitative versus quantitative methods. Some of his other concerns appear to result from ways in which he is out of touch with the reality facing the majority of independent working fishermen, perhaps due to the fact that he deals in his professional life primarily with quota owners and fishing companies who are in a very different situation than fishermen lessees of quota. Most other concerns that Turris raised in his response seem to result from misinformation about the availability of quota transaction data from the Canadian Department of Fisheries and Oceans and the data that we had available with which to conduct our analysis. Each of these is addressed in turn.

2. Qualitative methods

Turris repeatedly objects to our “lack of proper sources and references”. One of his main concerns seems to be that the fishermen and processors interviewed to obtain information on lease prices and leasing practices were not identified. To understand how data from these sources were used would require an understanding of both qualitative methods and ethical practices in qualitative research. Standard qualitative methods were used, as explained in one of the many classic texts [4]. Triangulation, or comparing across many data sources and methods of obtaining data, was one method used to achieve reliability. For example, do fishermen lessors, fishermen lessees, and processors/brokers agree on the data? Do different processors and different fishermen agree on the data? Do they tell different researchers inside and outside the fishing industry the same thing? What do fishermen post on the electronic discussion forum BCFishNet in conversations among themselves? What do fishermen publish in trade magazines or local newspapers? Do the most important sources of data have reputations for honesty and reliability among both fishermen and processors? Almost four decades of observation and study of the BC fishing industry [5] permits a researcher to interpret inconsistencies among sources. Qualitative methods are the most appropriate for researching the relationships among processors, quota holders, and lessee fishermen because of the asymmetric information and market power described in the paper and because of the way the system has evolved over time.

Ethical practices are also key to qualitative research. Some information is only obtained under conditions of trust and confidentiality. Social scientists who conduct ethnographic research with “human subjects” are required to protect the confidentiality of the informant, and it would be a serious breach of professional ethics to reveal these sources. (For example, the Research Ethics offices of Canadian universities require extensive commitments from the researcher about this protection before research funds are released.) To be fair to Turris, his response in this area is not surprising or uncommon, since most researchers in his discipline use very different methods, and do not conduct research of this nature.

3. Understanding the institutional context of the fishery

However, there is another aspect of Turris’ demand for sources that is cause for concern. If Turris were fully aware of the relations among processors, lessors, and lessees in the halibut fishery, he would know that we could not reveal primary sources for an additional reason: a fisherman who protests too loudly about the ITQ leasing system risks being “blacklisted” and refused leasing opportunities by those who control quota leases. Examples of this having happened were noted by several fishermen interviewed.

Turris’ apparent lack of understanding of this fundamental condition raises questions about what he understands about other aspects of quota leasing. Our article also cites 27 secondary sources discussing problems in ITQ systems, including one on ITQ leasing in the BC halibut fishery [6], one on ITQ leasing in Iceland [7], and two including discussion of ITQ leasing in the US [8,9]. In stating that we do not cite sources, Turris does not appear to have read these or even noticed that we cited them.

Another area in which Turris demonstrates lack of awareness of the situation of lessee fishermen is his analysis of the profitability of their operations. Turris states that vessels that own little of their own halibut quota and lease large amounts of the quota they fish are nevertheless profitable, based on the analysis he presents. However, he presents a best case scenario. In the costs and earnings table he has developed with information from Nelson Bros. [10], he fails to include the caveats included in the original report, namely “that there is enormous variation in costs and sharing arrangements amongst the halibut fleet—particularly in leasing arrangements and crew settlements—so that the financial schedules could change dramatically under different assumptions”. Turris assumes a very low number of crew, corresponding low crew costs and high crew shares, a low lease price, and a high average catch per day of 4000 lbs. Furthermore, it is well recognized that vessels that are able to secure the quota and fish a full block of quota (approximately 90,000 lbs in 2006) perform better than those vessels that fish less than a full block [10]. What Turris presents is a best case scenario, with high catches and a lower end lease price. Vessels leasing large amounts of quota can be profitable under best case conditions, but the best case scenario should never be treated as the norm when evaluating the performance of a management system.5

4. Missing the point and misrepresenting the facts

As an example of ignoring the larger issues in favour of focusing on irrelevant details, Turris disputes our statement that “whereas the value of the halibut fishery has increased by 25% between 1990 and 2007, the proportion of that value retained by the crew share has dropped by 73%”[2]. Turris does not dispute the drop in crew share but states that “between 1990 and 2007, the landed value of the halibut fishery increased by far more than the 25%”[1], going on to note the landed value of the halibut fishery in 2005. Turris’ use of this earlier year with one of the highest landed values of the ITQ period constitutes obfuscation which in no way reflects either an inaccuracy in the information we reported or the reality of falling crew shares. The landed value of the 2007 fishery increased by less than 25% relative to 1990, as based on landed value reported by DFO [13], and was considerably less in 2007 than in 2005 due to both a drop in ex-vessel price and in the TAC. The salient point here, however, is that despite the fact that the fishery is worth more today

5 There are normally four or even five deckhand shares, as the skipper takes one or two shares, so 4.5 would be an average number of deckhand shares, according to the BC Longline Fisherman’s Association, which represents a large number of active halibut fishermen on the BC coast in 2008–2009 and has conducted its own analysis of the fishermen’s costs and earnings which does not agree with Turris’ analysis [11].

4 Nelson identified that lease prices in 2007 ranged from $2.90–$3.50/lb [12] and our own investigations put average lease prices at $3.50/lb [2].
than it was in 1990, the crew receives far less. This drop can be directly attributed to the fact that the lease value of the quota (regardless of whether the quota is leased or not), averaging about 70% of the ex-vessel price, is deducted from the gross stock before crew shares are determined, so that there are not only fewer crew members in the fishery but, also, per lb fished, crew are receiving less.

There are also important historical facts about the industry which Turris misrepresents. He disputes our statement that the ITQ system was “twice voted down by a majority of fishermen”, claiming that there was strong support for adopting halibut ITQs, and that “the BC halibut ITQ system was never voted down by a majority of fishermen”. Our brief reference understates the considerable opposition. Halibut ITQs were voted down multiple times during the 1980s and early 1990s by various commercial fishermen’s organizations whose members held halibut licenses, and opposed by the majority of fishermen organizations’ representatives on the Minister’s Advisory Council (MAC) 1983–1986, and on the Commercial Fishing Industry Council (CFIC) which replaced MAC. The MAC minutes [14] reveal that the first formal vote on the MAC opposing halibut ITQs occurred on January 20, 1983 on the first occasion that Department of Fisheries and Oceans (DFO) requested their opinion. DFO announced on January 24, 1983 that it would respond to pressure from the MAC and postpone any attempt to implement halibut quotas. Discussion of and opposition to halibut ITQs continued on MAC and on CFIC when it replaced MAC. ITQs in halibut were consistently opposed by the Native Brotherhood of BC, the United Fishermen and Allied Workers Union, the Pacific Gillnetters Association, the Cooperative Fishermen’s Guild, and sometimes by the Fishing Vessel Owners Association of BC and the Prince Rupert Coop [14]. DFO finally announced on October 31, 1986 that it would disband the MAC and began attempting other strategies to garner the support of fishermen for halibut quotas (and many other issues). As late as 1991, during the hearings of the Cruickshank Inquiry into Licensing, many of these organizations submitted briefs expressing their opposition to halibut ITQs [15]. By the late 1980s, DFO became more strategic and was finally successful in initiating the system. But not without a court challenge by four halibut quota holders [16] opposing what they believed was an unfair process. Although the case was primarily intended by the plaintiffs to restore their fair share of quota, it became an occasion to register general dissatisfaction with the non-transparent manner in which the vote was conducted among the halibut license holders. The federal court judge in the first decision on this case found that “...the Halibut Advisory Committee process (the DFO mechanism for consulting industry and designing the ITQ system) was not only democratic, but also it was highly unreliable in reflecting the views of license holders...DFO wanted a quota system to result from the process and managed the process to see that this result occurred” [16]. This judge found that there were “numerous irregularities in naming members to the Committee” and that “the extent of the support for the proposal was somewhat imprecise since 70% of those that responded on the vote to the proposal turns out to be only 47% of all license holders” [16]. While the appeal of this case found that the Minister of Fisheries had no legal obligation to consult fishermen, had not exceeded his jurisdiction, and that there were no irregularities [17], Turris’ claims about “strong support” and “never voted down” suggest something quite different from the historical reality. It is worth noting that some of this opposition⁶ was based on the fear of greater control of fishing rights by processors and foreign ownership of quota through market-based transferability, e.g., “…even DFO has admitted that quota can be bought up by foreign companies...Because of the free trade agreement and GATT, it is virtually impossible to control foreign ownership…the result could be processing jobs going offshore” [15]. Our paper showed that these fears were not unfounded, since processor/brokers now exercise considerable control over quotas.

On the issue of quota concentration, Turris appears not to have noticed that our analysis focused less on ownership of quota than control of quota through the ability to broker the leasing of large amounts of quota which are not necessarily owned. He also appears to have missed our analysis of how free transferability and high lease prices attracted investors into the fishery who bought up quota for the sole purpose of leasing it out as a good return on investment. Butler [6] documented investors being attracted to halibut quotas by the ability to get a 10% return on their investment through leasing.

Turris claims that “ownership of halibut licenses and quota has stayed with active fishermen”. Turris bases his claim on the fact that only 16 halibut licenses were registered as processor owned in 2000 and on his belief that a quota owner can earn more money fishing quota than leasing it. However, our analysis of the quota ownership reported in our original paper indicates that more than half of the quota is fished by someone other than the registered owner [18]. Thus Turris’ claim that ownership rests with active fishermen is not supported by the data: the majority of halibut quota is fished by someone other than the owner. Ownership of halibut quota no longer rests with active halibut fishermen. Turris’ claim is also not supported by the fact that a quota owner can do well by leasing out his quota without incurring the costs or risks of fishing, and many previously active fishermen have preferred to do this as the lease price increased and they retired from the fishery.

Turris attempts to persuade readers that the average quota lease price over time is more important than the directional trend of increase. However, averaging in this situation has the effect of directing attention away from an important trend we documentied. Interviewees told us that quota owners only gradually learned over time that they could charge a higher price, and that it became more and more difficult for lessees to secure reasonable prices when more and more lessees demanded higher prices. Lessees already owning substantial quota could afford to pay more, thus bidding up the lease price. Many lessees and lessees consider a “50/50” arrangement, a fair one which allows a lessee to make a reasonable profit [19], and there is a rough consensus about how much per pound is required for a lessee to survive. This was in fact the leasing norm for the beginning years of the program, when owner–operators predominated. The lease price began to escalate when more owner–operators retired from fishing, and sold quota to new non-fishermen investors or retained their quota to generate income from leasing. Averaging the lease price over time masks these historical developments and likely future directions, distracting from the analysis rather than contributing to it. Turris’ figures on lease prices are not consistent with those provided to us. However, even his deflated figures and averaging show a lease price of 62% of the ex-vessel price, which lessee fishermen and some processors consider excessive [19, interviews].

Turris’ point that transferability is useful for achieving goals other than efficiency is valid. However, he fails to mention that regulating the quota market would facilitate meeting the multiple objectives of the fishery, through regulations limiting ownership, leasing, and improving the transparency of the quota system.

On the issue of safety, Davidson’s article echoes our analysis and the findings from New Zealand and Iceland. Clearly, safety is better on some vessels compared to a derby style fishery, but has

---

⁶ Likewise, some of the support for ITQs was based on the fishermen’s hope that their fishing privileges would be bought back by the government at a higher price as ITQs than as mere licenses when aboriginal fishing rights were fully allocated through final treaty negotiations. Indeed this is already happening.
decreased for many of the vessels that must lease a large portion of their quota and as a result are not generating enough income to maintain adequate repairs, are fishing in times of bad weather to maximize the landed value of their product to offset the lease prices they are paying, and are undercrewing their vessels. Turris cites the 1992 DFO internal audit of the individual quota system to support his assertion that safety in the fishery improved under individual quotas. This source says nothing of the fishery today and referenced a time in the fishery when quotas were not transferable and there was no leasing, failing to address the issues we raised about the impacts of leasing on safety.

Finally, Turris makes statements which ignore or repeat those in our paper, such as asking “are there alternatives?” There is an extensive literature on alternatives. For example, economist James Wilson and co-authors [20] summarized a rich literature produced in the previous 20 years, which identified a wide range of mechanisms used around the world to spread fishing effort over a longer season and avoid the crowding and race for fish which characterized the BC halibut fishery once the layup system had been abandoned. Young describes an Australian system of catch shares which focuses on fisheries and habitat rather than species and avoids many of the problems inherent in unlimited temporary transfers [21].

5. The extent of quota leasing

Turris questions our use of the 79% value for 2006 leasing. Our paper stated on p. 708, “temporary transfers are an indicator of how much quota has been leased out annually since 1993.” Quota transfers are an important proxy for leasing in the halibut fishery. Leasing itself is not tracked in the fishery, but the majority of quota transfers are due to leasing events and this data set is an important source of information for quantitatively assessing the state of the BC halibut fishery. Turris’ criticism of the use of this value seems to arise in part over a difference of opinion between Turris and ourselves on what constitutes leasing and what aspect of leasing is worthy of consideration. Our working definition for quota leasing encompasses all events where quota rights are traded between individuals or companies. The exchange can be for money or for other quota of like value. Quota transfers between vessels or licenses owned by the same individual were not considered leases, but quota traded to a processor and then traded again by the processor to a fisherman were considered not leases, but quota traded to a processor and then for money or for other quota of like value. Quota transfers, there was 33,000 lbs of halibut quota transferred between licenses on the same vessel, representing ~ 0.3% of the halibut TAC. The transfers associated with these 33,000 lbs were not considered leasing events and were excluded from our consideration of leasing activity. These 776 transactions also included instances where quota was transferred more than once during the season, e.g., from the original quota owner to a processor and then at a later date to a fisherman. Whether or not only the final quota leasing event should be considered in such an instance is not as black and white as Turris suggests, as each event does represent a discrete leasing transaction and demonstrates how common leasing activity is in the fishery.

If one excludes the multiple transfers of the same quota, a minimum of 6.7 million lbs, or 57% of the TAC, was fished by fishermen who leased the quota in 2006. The breakdown of this analysis as a percentage of the quota fished by the fishermen was provided in figure 2 in our original discussion [2]. This is a minimum because of the leasing events not captured by quota transfers. Turris noted ways in which the quota transfers could overestimate leasing, but he did not note the ways in which quota transfers could underestimate leasing. There are known instances within the fishery in which the license is owned by one person but the quota is owned by another, and leased annually to the license owner. Such arrangements usually arise when the original quota and license owner sells the license but retains ownership of the quota. Another situation within the fishery that involves leasing not captured by quota transfers is when the skipper and crew has no ownership of the license or quota, and fish the quota that is on the license. This is common with company-owned vessels, licenses, and quota, when the active fisherman has no ownership, or in some instances, a minority share (usually in the vessel). The quota is not transferred in either case, but a lease fee is paid by the active fisherman to the quota owner for the right to fish the quota. While these situations are known to occur, based on information shared by fishermen, the means to estimate how much quota is leased via these avenues is very limited.

While recognizing the imperfect nature of much of the data available for quantitatively assessing the state of the BC halibut fishery, it would be unacceptable to ignore this information. The case made in our paper rests not on establishing the exact percentage of leasing in the halibut fishery but rather on showing that leasing is a widespread practice and that there is a pattern of increase, which has been established based on the available data. Furthermore, there is ample supporting evidence from fishermen and processor interviews pointing to the fact that leasing has increased substantially over time, and that many quota owners now retain ownership of their quota after retiring from fishing to

7 We are mystified why Turris should state “the reader will look in vain for the data source and the desired explanation”, when the explanation was stated in our text that the data on temporary transfers are public. Contrary to Turris’ assertion that the data necessary to do this analysis are confidential and therefore not available, as attributed to personal communication with a DFO halibut manager, individual quota transaction data are publicly available and were obtained by one of the authors through an Access to Information request. This data set was analysed to derive the leasing and ownership values reported. The data released included each quota transaction, both temporary and permanent, that has occurred in the groundfish fisheries between 2000 and 2006. Each transaction record includes the date of the transaction, the quota species and quota management area, the poundage transferred, the license from which the quota was transferred and the license to which the quota was transferred. In total, for the halibut, groundfish trawl, sablefish, lingcod, dogfish, and rockfish fisheries, more than 95,000 transaction records for this time period were received from the DFO [18].

8 An in-depth analysis of processor ownership, outside the scope of the original paper, is one means to partially assess quota leasing activities that would not be captured by quota transfers. We reviewed the ownership and quota transfer activities of only the top four processors in the halibut fishery to illustrate. Collectively, these four companies owned 21 licenses in 2006, and just under 6% of the TAC. Vessels owned outright by these companies fished close to 10% of the TAC. Quota leasing that would not be captured by quota transfers is estimated at just under 4% for these four companies. Incorporating this additional analysis suggests that in fact a minimum 61% of the TAC was fished by fishermen who leased the quota in 2006.
generate lease revenue. One processor who brokers quota leases stated, in response to Turris' comments, "if leasing is not at least 80%, I'll eat my shirt!".

6. Conclusion

Overall, the most notable aspect of Turris's rejoinder is that he does not challenge our central argument about the ways in which the assumptions of economic theory that certain conditions must apply in the halibut fishery to allow the operation of a free market in fact do not apply. Turris redirection of the argument to other topics is not helpful in debating the new points we had raised in "The elephant in the room". The contribution of our article was to draw attention to what largely has escaped notice and not been discussed by the proponents of quota up to now: that faith in a virtually unregulated quota market to meet the multiple objectives of the BC halibut fishery has not produced the desired results which some economists are now claiming [3]. It is not sufficient to sum up the fishery as "economically valuable", or to simply state at the outset that overall changes in the halibut fishery, including the adoption of ITQs, have resulted in a more sustainable and economically valuable fishery. This approach mostly ignores our argument and is thus not an authentic "rejoinder". Many examples exist which demonstrate the dangers of a poorly regulated market. Market collapse is the eventual logical outcome of such a scenario and analysts should be doing everything possible to identify problems before they become insurmountable.

Acknowledgements

The authors thank Jim Wilson, Daniel Bromley, Stefan Schott, Arthur Bogason, Einar Eythorsson, Martin Weinstein, Stephen Long and many fishermen and processors for helpful discussion of many of the ideas in the paper. They are not responsible for any errors of interpretation or fact.

References