



The elephant in the room: The hidden costs of leasing individual transferable fishing quotas

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ABSTRACT

Despite the increasingly positive reviews of individual transferable quotas (ITQs), few studies have considered how quota leasing activities can reduce the economic benefits to society and to fishermen operating under the ITQ fisheries system. This analysis reveals negative economic impacts of ITQs previously overlooked by examining the extent of quota leasing and the relationship between the catch value, the cost of fishing, and the quota lease price in the BC halibut fishery, long considered a poster child for ITQs. Findings challenge assumptions of economic theory used to promote the benefits of ITQs.

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1. Introduction

Individual transferable quotas (ITQs) are permits allowing the holder of the ITQ to catch or transfer a share of a total allowable catch (TAC). Typically, these permits do not expire, although if a fishery must be closed or diminished, the permit is similarly devalued. Most ITQ systems by definition allow these permits to be leased or sold to others. ITQs have received increasingly widespread positive evaluations from resource economists and fisheries managers, and have been widely adopted and accepted as a way of dealing with problems in fisheries management [1]. At the same time, problems with this approach have been raised by economists [2], political scientists [3], anthropologists [4], and geographers [5]. Yet, as some scholars have noted [6], there are few detailed empirical studies assessing changes in efficiency in the same fishery following the creation of individual quota programs. This discussion attempts to address this gap by examining how widely adopted quota leasing practices impact the delivery of economic benefits to society and to fishermen operating under an ITQ system.¹

ITQ advocates posit that ITQs should be transferable via the market to allow quota to gravitate to the vessels and operators with the lowest fishing costs [9]. ITQ advocates also hold that these “efficient” vessels yield the greatest public benefit by virtue of the fact that they have the lowest fishing costs and thus their operations result in the least dissipation of wealth for society in general [10]. The role of quota leasing has been largely ignored in ITQ analyses, which can be explained by a common assumption that leasing automatically means a transfer of wealth rather than dissipation of wealth. This discussion questions the role of quota leasing as it relates to the achievement of an economically efficient fishery and the service of the public good. The impact of leasing on the financial viability of fishing operations, the costs of leasing, the extent of leasing, and the functioning of the quota leasing market are examined in the halibut fishery ITQ system in British Columbia, Canada. The BC halibut fishery was chosen because of its position as a “poster child” success story [11].

The leasing of quota is “the elephant in the room” of the BC halibut fishery. Despite the fact that the amount of the TAC which is leased out (i.e. not fished by the quota owner) has steadily increased to 79% in 2006, leasing is unmentioned, little mentioned, or considered insignificant by most analysts of the BC system. The discussion will reveal how hidden assumptions embedded in the analysis of ITQs, especially assumptions about the negligible impact of the initial allocation of permits, adequate information, and the effective functioning of capital markets have contributed to a failure to identify important impacts of quota leasing. An analysis of the impacts of leasing invites a new consideration of the benefits which have been claimed for ITQ systems that lack a mechanism to regulate leasing and control the concentration of holdings.

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¹ One study [7] did measure efficiency gains in the BC halibut fishery through 1994, but did not consider leasing, as the authors believed that “most of the active vessels are owner operated”. By 1994, 34% of the quota was already being leased out, but the lease price at that time was only c. 50% of the catch value, enabling what lessee fishermen considered a reasonably fair distribution of benefits. The problems identified in this discussion did not become evident until 1998. An overview of ITQs [8] reviewed outcomes in less detail and noted leasing at 50–60 % of the catch value in Iceland.

2. Methods

Methods included 15 years of discussions with an array of BC fishermen and fish processors about the operation of ITQs, monitoring of the discussion among fishermen on the listserve BC FishNet, review of the literature on ITQs in several disciplines, and detailed analysis of business practices, transactions and fishing costs of the BC halibut fleet. The detailed analysis used data obtained from Department of Fisheries and Oceans, interviews with fishermen, and monitoring of service provider reports [12].

The analysis will focus on (a) the relationship of the catch value obtained by fishermen to the lease price paid by lessee fishermen, including the impact of the lease price on the financial viability of lessee's fishing enterprises, (b) the extent and nature of leasing in the fleet, and (c) the impacts of leasing on the achievement of management objectives for fleet stability, viability, safety, efficiency, and greatest net benefits to society.

3. ITQs in the BC halibut fishery

There are several reasons why ITQs in the BC halibut fishery should be among the most successful ITQ systems and why it, therefore, provides a best case scenario, a good test case of how an ITQ system can work. Since 1923, the Pacific halibut fishery has been managed by some iteration of the International Pacific Halibut Commission, which exercises considerable oversight and collects stock status information. There has been a history of reasonably effective conservation, keeping the TAC at a level that avoided stock swings and collapses, unlike many other fisheries [13]. Because of beneficial characteristics of halibut physiology (no swim bladder) and markets (same price per pound regardless of size), problems common in ITQ fisheries have been largely avoided in halibut. Thus there are fewer incentives to highgrade (retaining only the largest fish) because halibut has traditionally been sold at the same or similar price per pound whether the fish is larger or smaller. Although this has been changing in recent years, the change has not been significant enough to precipitate high-grading. Unlike many other groundfish, halibut has low discard mortality so that when juvenile or under-sized halibut are hooked and discarded, greater than 80% are expected to survive [14]. Highgrading and discard mortality of the target species are, therefore, two problems widely appearing in ITQ systems [15] which are absent or minimal in the halibut fishery.²

Because of the contentious nature of the halibut ITQ system, twice voted down by a majority of fishermen, a rule was created capping the holding of more than 1% of the TAC as quota on a single halibut license. This rule inhibits the concentration of vessel catches, although it does not inhibit quota ownership concentration, since nothing prevents a party from holding multiple vessels and multiple licenses.

ITQs were implemented in the BC halibut fishery as non-transferable individual quotas for the first two years, 1991–1992, and became temporarily transferable as leases in 1993. In 1999, restrictions were lifted on permanent transfers (sales), although a number of sources indicated that permanent transfers were easily made through private arrangements previous to the formal lifting of restrictions. Temporary transfers are an indicator of how much quota has been leased out annually since 1993.

² The discard mortality of species caught incidentally in the halibut fishery has been identified as a significant problem [16], but does not bear directly on this analysis.

4. Analysis: the relationship between catch value and quota lease price

The lease price of quota an increase from \$1.95/lb (in constant 2008\$) in 1993 to \$3.80/lb in 2008, an increase of nearly double, (Table 1). The purchase price of quota increased during the same period of time by 2.5 times, from 3.5 times the ex-vessel price (landed value of the fish paid to the fisherman) in 1993 to more than eight times the ex-vessel price in 2007. The ex-vessel price of halibut has remained relatively stable over this time period, increasing at first due to improved product quality and enhanced fresh product flow from a longer season, but then stabilizing, while quota sale and lease prices continued to rise.

The relationship between the value of the catch (the ex-vessel value) and the lease (and sale) price of quota demonstrates that a lessee faces a cost-price squeeze between what he must pay to lease the quota and what he is paid for his catch. Therefore, the assumption that “the market value of the ITQs reflects the market's perception of the net present value of the future stream of net economic returns from the fishery” [17] applies only to the value of the fishery to quota owners and not to vessel operators who lease quota.

The rise of the quota lease price as an increasing proportion of the ex-vessel value (i.e. catch value) of the fish (from 53% in 1993 to 78% in 2008) should be considered in evaluating the financial viability of fishing enterprises. In analyzing the financial costs of fishing, it is useful to distinguish fixed annual costs, variable fishing costs, or “trip costs”, and lease fees. Leasing is by far the largest fixed annual cost, and operations that lease the majority of the quota that they fish, are marginally profitable or unprofitable (Fig. 1).³

There are three factors which account for the high quota lease and purchase prices out of proportion to the value of the catch. The first two of these factors have generally not been identified by the fisheries economists prominent in the discussion of ITQs [1]. Nonetheless, it is clear that their claims about the efficiency benefits of ITQs rest on key unstated assumptions about the conditions under which trading of property rights will lead to efficient outcomes: (1) there are no wealth or income effects from the initial allocations of rights, (2) there is perfect information among all parties on all aspects of the negotiation, and trading of these rights, (3) there are low transaction costs for the negotiation, trading, and enforcement of the trade, and (4) there is a well-functioning capital market (access to capital by all actors). Many economists⁴ would claim that if these conditions are *not* met, trading of property rights will *not* lead to efficient outcomes (i.e. in the case at hand, the transferability of ITQs to the most efficient operators will not occur). It is argued below that these conditions are not met in the halibut fishery.

4.1. Factor 1. There are large wealth effects from the initial allocation of quota

Vessels that were not granted quota in the initial granting process must recover their fixed costs, trip costs and lease fees.

³ Two anomalies in the pattern of the rise of lease costs as a percent of catch value can be explained in the following way. The sudden higher lease price relative to catch value in 1998 occurred because of (a) expectations that the catch price would be remain as high as 1997 being reflected in the 1998 quota lease price and (b) an oversupply of frozen halibut from 1997 which lowered the catch price in 1998. The sudden lowering of this ratio in 2005 and 2006 resulted from fears that the new groundfish integration program would lower ability to catch halibut, and this was factored into the lease price. When this fear proved unfounded, the lease price rebounded in 2007.

⁴ This claim is often attributed to the “Coase theorem”, for example [18].

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