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Toward market orientation: the role of auctioning individual seasonal quotas (ISQ)

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Abstract

This paper explores fish auctions as a management tool for allocation of quotas and a motivating institution for market-oriented value adding (MOVA) among target fishery groups, as an alternative or supplement to the individually transferable quota (ITQ) system. A management model is developed where administrative allocation of fishing rights to preferred target groups is combined with auctioning of individual seasonal quota (ISQ) rights as leasing contracts to fishery companies. It is shown how the management model maintains the positive effect of ITQs in terms of maximizing the resource rent in fisheries whilst the negative effects in terms of privatization, unfair allocation, concentration of quota power and possibly weakened linkages between fish resource utilization and coastal communities, are avoided. The costs of the administrative constraints should be weighed against the advantages of the model: (1) Sustainability and fair social allocation of the rights to utilization of the fish resources can be maintained without privatization. (2) Motivating MOVA among target groups through the allocation of ISQs to the most market-oriented and efficient fishers is encouraged since quota is leased but not owned. (3) Collective use of the resource rent is extended to the wider community.

Keywords: Market orientation; Value adding; Sustainable development; Resource rent; Fisheries management; Institutional economics; Fish auctions; Fish marketing

1. Introduction

The purpose of this paper is to explore fish auctions as a management tool for allocation of quotas and for motivating regional market-oriented value adding (MOVA) without the disadvantages of the individually transferable quotas (ITQ) system which are privatization and possible concentration of quota control in a few hands and subsequent monopoly behavior.

The first two sections outline the concept of MOVA and how it is influenced by the mechanisms of the fish auction. The third section discusses how regional fish auction models can be adapted for allocation of fishing rights (quotas or fishing days) to target fisher groups without reducing the motivating effect of MOVA. The last two sections discuss costs and benefits of quota auctions and motivation factors for collection of the resource rent.

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2. The motivation for market orientation

Value adding has two sources: (a) Increasing the value of the catch by improving market orientation in supply of quality and time, processed by-products and target products, etc. or (b) reducing the cost of catch and production. Market orientation is conceptualized as a business behavior and culture, which utilizes market values and creates superior value for buyers by generating, disseminating, and responding to market intelligence [1,2]. Market orientation is a long-term business learning process, which requires business resources [3,4]. Thus larger timescale raises questions about what motivates fish business and their employers to invest time and money in long-term MOVA activities and what role does fisheries management play as a motivation factor? The industrial organization and strategy literature shows that industry structure as mobility barrier is a main motivational factor for industry strategies and performance [5,6]. Fisheries mobility barriers in terms of fishery management systems are of key interest. Access to and control over

raw material is a main barrier for fishing firms operation and for resource rent generation [7].

Over time, the objectives of fisheries management have progressed from motivating maintenance of sustainable fish stocks, to allocating fishing rights to preferred fisher groups and lately to improving profitability through cost efficiency. So far, less attention has been paid to fisheries management impact as a motivational factor for MOVA [8]. Here, we will discuss fish auction as a management tool for motivating MOVA of fish quotas.

3. Motivation for market orientation through fish auctions

The principal advantage to fish auctions is that they allocate and exchange diversified values between demand and supply [9]. Fish auctions have been utilized as the main instrument to exchange multi-species landings of fresh fish between fishers and first-hand buyers in most European countries. The experiences from these auctions show that the fishers gain higher prices compared to all other exchange systems if the catch attributes and/or purchase preferences are heterogeneous [10]. Auctions that offer catch from many vessels give heterogeneous buyers the opportunity to purchase their preferred part of the landings (e.g. one species of a specific size and quality) from several catching vessels. The buyers then have the opportunity to specialize in products and markets. Such strategic specializations may improve the market-oriented margin [11].

An alternative to the auction is contracts (short or long run) directly between individual vessels and the first-hand buyer as practiced in the Norwegian cod fishery. Buyers under such contracts are obliged to purchase the entire catch, which may contain a broad range of heterogeneous product attributes. The product attributes in the catch that do not fit the purchaser's specialization profile will, in such cases, meet less demand compared with the product attributes which do. Such contracts, between sellers of catch containing heterogeneous product attributes and specialized buyers, reduce the possibility for product specialization and MOVA in this transaction compared with exchange through auctions where heterogeneous buyers are present. This hypothesis is confirmed by comparative analysis of north Atlantic fish landings which show that the average prices paid for catches under contracts are significantly lower than prices for fish traded through auctions [12]. It is also a trend in Iceland that buyers who control catchers under long-term contracts resell in the auction parts of the catch that do not fit their own specialized vertical integrated production. This means that the first-hand buyer collects the margin, which the fishers would otherwise collect if they sold directly through the auction [10].

Fish quotas have heterogeneous product attributes that have various values (product prices and costs of catching) for different fisher groups. The values vary with quota attributes such as species, quantity, fish size, season, catching area, catch gear, days at sea, permissible by-catch, closed fishing area, spawning ground regulations, etc. Fishers with different preferences will put various values on quota attributes depending on their capability with respect to vessel type, fishing gear, home location, seasonal combinations, onboard processing and marketing strategy (Fig. 1).

If quotas are allocated by administrative systems (e.g. tons after size of vessel), the options regarding combining quota attributes among individual vessels are constrained and so is the opportunities window for positioning toward specialized markets. The value adding activities are under such constraints more motivated toward cost cutting value adding activities controlled by the fisher [8].

If the fishers are free to choose among the quota attributes either through a unregulated fishery or if the quota's attributes are exchanged through auctions, the fisher's number of attribute choices may increase, which increases the possibility of bundling attributes that best fit the fisher's strategies, preferences, and the vessel's capabilities.

Such increased number of choices may improve the opportunity window for specialization of catch, processing and MOVA. Exchange of quotas in auctions will generate a price—actually a resource rent—that fishers are willing to pay to the quota owners whilst still able to run a profitable catching and processing operating for themselves. Competition for quotas among fishers also gives an incentive to increase operation margins between costs and market values. Without governmental constraints on what type of vessel the fishers are allowed to use, the fishers are motivated to choose the mix of products, markets, species, processing technology and capacity which satisfy their rent expectation from a given quota in the same way as the ITQ systems [13].

This will motivate all participants to improve the value adding of limited total quota, which in turn may increase the resource rent generation. The quota owner might through these kinds of auction sales, collect the

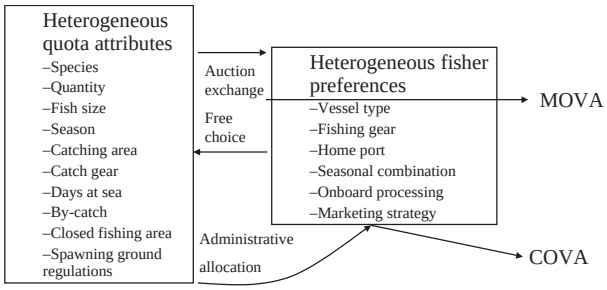

Fig. 1. Quota allocation and value adding orientation.