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Into the scrap iron business: Transaction costs for fleet sustainability in Norway

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ABSTRACT:

For decades the need to reduce surplus fishing capacity has been a fisheries political priority. While decommissioning schemes (buyback programs) usually is a publicly financed measure to reduce capacity, the Norwegian decommissioning scheme is privately financed. Whereas market-based transactions are assumed to lead to cost free adaptations, the Norwegian version reflects public policy aims which impose severe transaction costs on private actors. This article examines the use of market mechanisms for fleet capacity reduction, how private actors adapted to the new order, and the transfer of quota transaction costs from the public to the private sphere.

1. Introduction

Prior to the 1970s, there was a relative absence of regulations in the deep-sea fishing fleet. Lack of an effective quota regime at international and national levels, created a connexion between the catch efficiency and unlimited catch rates. The collapse in the Atlanto-Scandinavian herring stock at the end of the 1960s and the severe overfishing of the Barents Sea cod stock during the 1970's are paramount examples of mismanaged fisheries [1]. More than thirty years later, a vast part of the world fish stocks are still subject to overfishing. According to OECD [2], one of the main obstacles to achieving a sustainable resource management relates to an unprofitable overcapacity which hinders the adjustments of the industry to limited fish resources.

Despite the closure of the commons, the introduction of quota systems, decommissioning programmes, market-based structural measures and detailed control over the fisherman's day, problems created by over-capacity have persisted [3,4]. According to the FAO [4], over-capacity in fishing leads to increased pressure on fish resources and high administrative management costs. In addition, the fishermen are economically marginalised and over-capacity leads to conflicts regarding allocation of fish resources among actors.

Concerning problems related to unprofitable overcapacity, the Norwegian fishing fleet is no exception [5,6,7]. Since the late 1980's, fleet reduction has thus been high on the fisheries political agenda. Using the cod trawler fleet fishing in the Barents Sea as empirical case, the first steps to reduce capacity were to limit the numbers of fishers and vessels. From July 1976, a permanent group quota was established for the trawlers and non-transferable individual vessel quotas (IVQs) were introduced [8].[1] Unlike individual transferable quotas (ITQs), where the vessel and the quota represent two separate and tradable commodities, the vessel and quota within the IVQ model are inseparable. In this manner, the IVQ model provided politicians and the public authorities with the possibility to regulate quota allocations, design vessel rules and fishing gear restrictions in a detailed manner [9].

In the late 1980s, a new decline in the Barents Sea cod resources occurred. Except for high quotas during 1986–1988, the cod stock reached a historically low level during in the period 1989–1992 [1]. After years of poor economic performance, the need for fleet renewal pushed forward a debate to increase the economic efficiency. The scope of the debate varied from arguing for sole state responsibility in terms of public financial support to maintain the existing structure, to the introduction of a traditional ITQ system. While trawling represented the most conflict ridden fleet in Norwegian fisheries, the suggestion of ITQs was even more disputed [10]. The coastal communities and the Fishermen's Association feared that a shift from non-transferable IVQ towards ITQs would weaken the established system of negotiations between the state and the fishermen's organizations. Among others,

[1] Based on the trawler fleet's share of the national total allowable catch (30–35% of the TAC), the entire group quota are divided into 87.5 quota factors (QFs). When the QF-system and vessel quotas were introduced, the smallest trawlers were allocated a QF ranging from 0.35–0.65, the trawlers owned by the industry were allocated a QF ranging from 0.6–1.0, while a factory trawler was allocated a QF of 1.6.

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the laws of the markets and an unacceptable concentration of quota rights that would undermine the income basis for the fisheries dependant districts were lifted as the most prominent threat of an ITQ system [11].

Relevant for the debate about transferable or non-transferable vessels and quotas, is the theory of institutional economics that outline the tension between political values and norms versus the laws of the markets and potential market failures that may lead to unwanted side effects and hamper the potential efficiency of the system. The profound scepticism to ITQs in Norway has been linked to what extent the ITQ-regime may deviate from political goals, such as balancing social equity (cf. resource allocation) with the need for increased economic efficiency in a manner which is adapted to the settlement pattern of rural fisheries dependant districts. Contrary to maintain such social aspects via political decisions, transferable quotas may favour the most efficient actors and transform the potential resource rent into profit [12]. In this context, economists suggest that free competition secures the most efficient allocation of a society's resources and that political decision systems cannot provide solutions that correspond to the efficiency of the market [13].

However, political values and norms are not necessarily congruent with the potential effects of the market mechanism as a decision system [14]. Despite the claimed efficiency from the market, possible market failure may lead to non-optimal use of available resources. Examples of such failures are public regulations of transactions, imperfect information or lack of information about new technology or markets, absence of necessary input factors (e.g. capital), damaging competition which may impose extra social costs, imperfect competition as actors act as monopolists and operate with artificially high prices, and other negative externalities in the form of e.g. over-consumption of common resources (cf. the "tragedy of the commons") [15].[2] Consequently, as different forms of market failures may occur, this again explains the use of institutions (cf. the IVQ regime) to regulate for a policy driven fleet structure and the allocation of fish quotas among a variety of actors in line with political objectives.

Nevertheless, since the end of the 1990s, the use of transferability have increased in a step wise manner and gained the most prominent position to reduce capacity and increase economic efficiency within the fleet. As the state was no longer willing to take responsibility for capacity adaptations and the economic performance of the fishing fleet, markets were constructed and the responsibilities was transferred to the private actors within the fleet. The numbers of transactions have increased, the numbers of trawlers are reduced and the quota-base (QFs) have increased for the remaining vessels [17].

The introduction of transferability rapidly became a source for severe conflicts in the political landscape. As the debate reflected strong divergent views among the parties in the sitting government and a deep scepticism within the Fishermen's Association, the political solutions were characterized by compromises and a mix of market-oriented transactions and regulations were transferred to fulfil overall policy goals.

Of particular interest in this paper is the attempt to reduce surplus capacity through a decommissioning scheme. The new market orientation allowed merging the quotas from two vessels onto one vessel, if the vessel giving up the quota is withdrawn from fishing. Later, the decommissioning scheme also required that the vessel withdrawn from fishing to be scrapped [18]. While Hersoug [19] described the Norwegian reform processes as "hesitant reforms", actors within the fleet characterized the mandatory scrapping as a "hinder to realize the efficiency of the market mechanism" and "state imposed costs without any real effect upon the actual fleet capacity" [20].

With reference to the neo-classical assumptions the market mechanism shall contribute to cost-effective transaction and the most efficient allocation mechanism [16,21]; this paper studies the development of the transferable vessel quota regime and the related decommissioning scheme in the Norwegian trawl fleet. Special attention is paid to how policy objectives are integrated into the market mechanism through detailed regulations, how private actors adapted to the system and how the system affected transaction costs. The aggregate effects upon the fleet structure and the distribution of quotas within the fleet are also outlined.

Section two describes the development of the structural policy and how transferability of vessel and quota gained increased importance to reduce capacity. Section three outlines how public policy aims were built into a conditional based market, and how private actors adapted to the system. Section four, describes the effects from a regulated market and how institutions may play multiple roles to fulfil both public and private goals.

2. Structural policy

In 1984, the small trawlers and trawlers owned by the processing industry allowed to increase their numbers of QFs up to1.5 QFs per vessel. Ownership of purchased quotas was limited to 13 years. In the early 1990 s, the system was also introduced in the factory trawler fleet. In 1996-97, this system was extended to the purse seine fleet and all groups within cod trawling.[3] In order to increase market-based quota transactions, the small trawlers and freezer trawlers were allowed to form a single market. The ceiling of quota concentration was all lifted to two QFs per vessel. At the same time, the duration of quota ownership was increased from 13 to 18 years, if the vessel was permanently taken out of fisheries [22].

Despite the opportunity to increase the numbers of QFs on each vessel, the increased option for transactions had a limited effect on the numbers of transactions. Consequently, in 2000 the system was extended even further, allowing the merging of up to three QFs per vessel. But the lifetime for purchased quotas was still limited to 13 and 18 years. However, the system still did not contribute to a sufficient capacity reduction within the fleet. In 2005, the 13 or 18 years ownership of purchased quotas was replaced with a permanent ownership and the scrapping obligation became mandatory for each transaction. In addition, the separate quota markets from different sub-groups within the trawler fleet were merged into one large vessel/quota market. Further, in order to restrict the transferable market, transaction from the north to the south was not permitted [23].

The conversion of purchased quotas with a limited ownership into permanent ownership lasted for two years (2005–2007) and led to a tremendous numbers of transactions and a strong reduction in the numbers of vessels, from 91 to 55 units. However, in 2007 there was a shift in the political government, whereby the new majority labour party government introduced a temporary "structure freeze" for the fleet. All aspects of the transferable regime were outlined by the new government [23]. Now, the former system of permanent ownership of quotas were rescinded and replaced with a maximum of 25 years ownership. The new regulations were also applied to the Greenland shrimp trawlers, purse-seiner, pelagic trawlers and the deep sea long liners. In 2013, the majority labour party government was replaced by a

[2] See also the term transaction costs, outlined by Williamson [16].

[3] In 1996, the trawler fleet was divided into three groups: small trawlers, fresh fish-trawlers, and freezer/factory trawlers.