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# Stubborn fuel tax concessions: The case of fisheries in Norway

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John R. Isaksen a, Øystein Hermansen a, Ola Flaaten b,\*

- <sup>a</sup> Nofima, Norway
- <sup>b</sup> NCFS, University of Tromsø, Norway

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#### ABSTRACT

In the context of the abolition of traditional subsidies, this paper discusses the persistence of the major remaining subsidy scheme in Norwegian fisheries: exemption from fuel taxes. This reimbursement scheme stems from the late 1980s, and has persisted since then under different governments. This paper gives the background to this support against theoretical predictions of the subsidy's effects on fishing behaviour and profitability. For 2011, the estimated exempted fuel taxes for the fishing fleet was NOK 999.0 million, amounting to 6.3 per cent of the landed value, against NOK 772.7 million (6.4 per cent of landed value) in 2007. The Norwegian scheme is also discussed in relation to similar arrangements in other countries. The national fishing fleet is heterogeneous with respect to oil consumption in transport and fishing operations. Hence, the effect of the fuel subsidy is different for different fleet components. The implications of abolishing this subsidy for the fishing fleet in general and for different vessel groups, as well as its policy implications, are discussed.

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## 1. Introduction

Subsidies for the world's fishing industry have been under scholarly scrutiny for decades. The reason is obvious: with more effort being directed towards capture activities, there is widespread evidence and understanding that fish resources are limited and even threatened with extinction. In many cases, subsidies have added to overcapacity and overfishing. The magnitude of subsidies within fisheries has been mapped and analysed at a global [1,2], regional [3] and national level, including in Norway [4–7]. Also, the effects of fisheries subsidies on fishing pressure, fish resources and trade have been under scrutiny [8,9], while other studies have focused on the definition of fishery subsidies and categorization of subsidy types [8,10,11]. OECD [12] includes a chapter on recent fisheries fuel tax concessions in member countries, implying that exemptions from a widespread tax may be considered in line with a cost reducing subsidy.

Open access common pool fisheries will usually lead to economic overcapacity and even to biological over-exploitation of fish resources. Revenue enhancing and cost reducing support contribute even further to this waste [10,13]<sup>1</sup>. However, the biological effects of

subsidies are hardly a problem when property rights and good

In the World Trade Organization (WTO) framework on subsidies and countervailing measures [14], financial contributions not only include the direct transfer of funds, but also revenue forgone by the authorities, provision of goods or services and the purchase of goods. According to the WTO, subsidies are further divided into two categories: prohibited and actionable. Export subsidies and subsidies favouring local content are prohibited. The trade and subsidies issue has been on the international policy agenda for more than half a century, almost since the inception in 1948 of the WTO's forerunner the General Agreement on Tariffs and Trade (GATT). Over the last two–three decades the climate change issue has been very high on the international agenda, emanating especially from the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and the 1995 Kyoto

E-mail addresses: john.isaksen@nofima.no (J.R. Isaksen),

oystein.hermansen@nofima.no (Ø. Hermansen), ola.flaaten@uit.no (O. Flaaten).

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fisheries subsidies. The reaction from the industry was fierce, some demanding that the Minister should sack Director Brochmann, but without success. Gradually, the industry representatives, led by the powerful Federation of Fishermen, came to understand that the subsidies were not sustainable.

management systems are in place, which is mainly the case in the Norwegian fisheries. In such cases subsidies mainly affect vessel profitability and the relative use of purchased input factors. Globally, several nations control their fisheries, but there are still many that are (regulated) open access. Sumaila et al. [2] estimated that worldwide fisheries subsidies in 2003 to be in the range of USD 25–29 billion, with fuel subsidies composing about 15–30 per cent of this.

<sup>\*</sup> Corresponding author.

<sup>&</sup>lt;sup>1</sup> Bjorn Brochmann, M.Sc. was on leave from the Ministry of Fisheries to the Norwegian College of Fishery Science in 1980 when writing this article. Later, when back at the Ministry, he argued internally and externally for the abolition of the

protocol that commits State Parties to reduce greenhouse gases emissions. Quantitative and economic instruments can be used by member countries to reduce such emissions, including tradable emission quotas and taxes on mineral oil. Price reducing subsidies of such fuel will definitely counter the objective of reduction in climate gas emissions, as will also exceptions from society wide taxes on greenhouse gases and other environmental damages. This type of exception from indirect taxation which has a specific purpose is often referred to as subsidies [12,14] – a connotation that will be used also in this paper.

From an economic theoretical point of view climate change mitigation should in principle equalize marginal abatement costs across countries. However, international agreements on objectives and distribution of obligations are difficult to achieve on a global scale. Nevertheless, some countries want to act on themselves and the question is how? Theoretical analysis has demonstrated from the cost minimization principle that equalization across sectors within a country should be the leading second best principle [15]. Also this may defend using the subsidy concept for fuel tax rebates and exemptions. Of course there may be other reasons for environmental taxes than climate change gases, as noted below. This research focuses on the Norwegian fuel subsidies scheme for the exemption of fuel taxes for fishing vessels, which has been in effect since 1988. The research problem is fourfold; first, to describe briefly the development of the Norwegian mineral oil tax and reimbursement scheme, particular in relation to fisheries subsidies; second, to portray the support for this particular industry with respect to the industry's development; third, to analyse the economic effects of a possible annulment of this support; and finally, to discuss the findings and reach conclusions about the impacts on the industry and policy implications.

The paper is organized as follows. The next section provides some background information for the analysis, including a brief review of the Norwegian fisheries subsidy history and the environmental taxation scheme and its development. Then, the data used in this study is described, followed by an account of the estimated value of the exempted mineral oil taxes and the economic effects for the major fleet segments. The methods and findings are then discussed; finally, the paper concludes with findings concerning the implications for the industry and policy makers.

## 2. Background

### 2.1. Fishing industry subsidies

Norway has a long history of providing assistance to the fishing industry, as well as to some other industries. Since 1964, the government has annually negotiated an assistance package with the Norwegian Fishermen's Association on behalf of the whole industry, with the overall objective of raising the average fisherman's income to the level of manufacturing workers. Total transfers to the Norwegian fishing industry added up to a considerable share of the catch value, peaking in 1980 at more than 30 per cent. However, from the mid-1980s fisheries subsidies were to a large degree phased out, and fell from a 20 per cent share of the catch value to less than five per cent over a four-year period [4].

In 2004 the Government put an end to the annual financial support negotiations with the Fishermen's Association. Since then, support to the fishing industry has been modest. Fig. 1 shows the peak in fisheries subsidies, as defined by the authorities, in the early 1980s, and the rapid decline since then. The fall in subsidies coincides with a rapid increase in catch per fisherman, as both the number of fishermen and fishing vessels were drastically reduced.

However Fig. 1 does not include the subsidy element of interest to this paper (energy tax exemptions and the fuel tax reimbursement scheme), since the Norwegian authorities apply a more cautious definition of subsidies than the WTO's "Subsidies and Countervailing Measures" agreement. Both the nominal and the real value (2012 prices) peak are found in 1980, with NOK 1.4 and 4.6 billion, respectively. After that, the subsidies have dwindled and since 2002 have been in the range of NOK 50–70 million.

The definition of subsidies varies between researchers and organizations [2,3,14]. Using the WTO definition of subsidies, the Norwegian fishing industry in 2008 was directly supported by NOK 72 million (about EUR 9 million), while the indirect support measures like general services and tax exemptions added up to NOK 2.21 billion. The main *direct support* items are transportation support (49 per cent) and support for the seal harvest (16 per cent). Of the *indirect support* items, the coastguard's fisheries-related activities (22 per cent), income tax deduction and CO<sub>2</sub>-tax exemption (both 16 per cent), and research support (14 per cent) take the lion's share. The next section takes a closer look at the fuel tax exemption scheme; but first, a brief review of the general environmental taxation scheme is warranted.

#### 2.2. Environmental taxes

Norway has long experience with environmental taxation. Taxation had an environmental impact long before taxes were established as an instrument of environmental policy. Already, in 1931 Norway introduced a petrol tax. The first tax with an explicit environmental purpose was the SO<sub>2</sub> tax on mineral oil in 1971. A widespread use of environmental taxes has been seen since the late 1980s and early 1990s, with purposes such as reduction of emissions of pollutants to air and water, and reduction of traffic accidents and traffic jam. Taxes on lubricant oil and some other types of oil were introduced in 1988, and a CO<sub>2</sub> tax on petrol, auto diesel oil, mineral oil and the offshore petroleum sector was introduced in 1991, but these taxes excluded fisheries and some other industries. Since the early 1990s, tax instruments have played an important role in providing incentives for cleaner production and consumption patterns, even though regulation has remained the main policy instrument to abate environmental damage.

Over the years some environmental taxes have been increased substantially, but at the same time exemptions and reduced rates for some industries have been introduced. In Norway, 7.1 per cent of central government tax revenue is derived from environmental and energy taxes<sup>2</sup>, which is equivalent to 3.6 per cent of GDP (estimates based on the 2010 budget). The level of green (environmental) taxation is one of the highest in the OECD area. Environmental taxes refer to taxes with an explicitly environmental purpose (e.g. CO<sub>2</sub> and SO<sub>2</sub> taxes). By the end of the 1980s the Government's opinion of the use of environmental taxation had become markedly more positive. Several governments have envisaged that increased revenue from environmental taxation could be used for reducing other taxes. In the early 1990s a governmentappointed commission noticed that 40 per cent of CO<sub>2</sub> emissions and 60 per cent of SO<sub>2</sub> emissions were exempt from taxation. It also criticized the weak correspondence between the CO<sub>2</sub> tax rate and the carbon content of different fuels. The CO2 tax should in principle be applied at the same rate for emissions from all fossil fuels and uses. However, the costs of restructuring in industries and of adaptation in local communities should be considered when introducing and increasing CO<sub>2</sub> taxation.

<sup>&</sup>lt;sup>2</sup> According to Eurostat definitions, environmental and energy taxes amounted to NOK 69 billion in 2010, including electricity and vehicle taxes [16]. The annual average exchange rate, NOK per USD, from 2008 to 2013 was 5.64, 6.29, 6.04, 5.61, 5.82 and 5.88, respectively.

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