Fisheries subsidies

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Fisheries Subsidies

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Overview

The *Sea Around Us* and the *Fisheries Economics Research Unit* (http://feru.org/) of the University of British Columbia currently identify 153 geo-political entities (countries or 'sub-country' spatial entities, or 'administrative entities' in *Sea Around Us* parlance) that provide subsidies to the marine capture fishing sector. A list of these entities can be found in Khan *et al.* (2006) and Sumaila *et al.* (2008), but will expand as part of the ongoing subsidies database building and refinement efforts.

Data are collected regarding government financial support for the years 1989 to present. Sources of data include government statistical publications, international organizations such as the Organization for Economic Cooperation and Development (OECD), articles published in academic journals, internet resources, and media items. The full list of data sources is currently available in Khan *et al.* (2006) and Sumaila *et al.* (2008, 2010, 2013).

Collected data are organized into thirteen subsidy categories (Table 1). Based on the available information, each data point for a given year, country, and subsidy type is classified as Type I, II, or III. Type I data are encountered when specific information is available regarding the subsidy and its magnitude. This information is divided across the program's explicit duration or an assumed length of 5 years and converted to USD. Type II data occur when information regarding the existence of a subsidy is available, but its magnitude is not available. Where there is no information indicating that a country provides a given category of subsidy it is classified as Type III data and entered as zero subsidies.

Data presented on the *Sea Around Us* website currently represent year 2003 and 2009 subsidies.

Table 1: Subsidy categories as defined and used by the *Sea Around Us* and the *Fisheries Economics Research Unit.*

Category	Description
Beneficial (Good)	
A1	Fisheries management & services
A2	Research & development
Harmful (Bad)	
B1	Boat construction & modernization
B2	Development projects & support
B3	Port construction & renovation
B4	Marketing & storage support
B5	Tax exemption
B6	Foreign access agreements
B7	Fuel
Ambiguous (Ugly)	
C1	Fisher assistance programs
C2	Vessel buyback
C3	Rural development programs
Other	
	Marine Protected Areas[a]

[a] Data concerning Marine Protected Areas (MPA) were from Cullis-Suzuki and Pauly (2008).

Estimation

Non-Fuel Subsidies

A simple method is used to estimate values for Type II data:

$$Subsidy_{i,j,t} = \beta_{j,t} \cdot LV_{i,t}$$

(1)

for countries i = [1,n], subsidy categories j = [A1, A2, B1, B2, B3, B4, B5, B6, C1, C2, C3], and years t = [1989, present).

The factor β is calculated as:

$$\beta_{i,t} = \frac{1}{n} \sum_{i=1}^{n} Subsidy_{j,t} \cdot LV_{i,t}$$

(2)

where n is the number of countries/political entities; and LV is the Landed Value of marine captures fisheries as calculates by Sumaila *et al.* (2007), i.e., the product of catch tonnage multiplied by the relevant ex-vessel price.

Fuel Subsidies

Fuel subsidies are estimated as for non-fuel subsidies. However, instead of estimating average total subsidy, we compute the average subsidy per liter of fuel and multiply this by fuel usage data presented in Sumaila *et al.* (2008) to arrive at total fuel subsidy for each of the over 140 spatial entities.

Subsidies for Marine Protected Areas

Costs for Marine Protected Areas (MPA) are computed by Cullis-Suzuki and Pauly (2008). Here, MPA costs in excess of 15% of Landed Value are not considered as subsidies, since it is unlikely that anything above this amount creates value for fishers. Applying this assumption, subsidies for MPAs are included as calculated by Cullis-Suzuki and Pauly (2008) up to a maximum of 15% of Landed Value.

Disaggregation

Subsidies are collected and estimated for the 153 geo-political entities (administrative entities); however, some of these countries are responsible for the administration of one or more dependent regions or overseas territories. Since we may be interested in subsidies provided by a given country to one of its dependencies, we estimate these dependencies' subsidies using Landed Value to separate subsidy estimates among a country's dependencies. This is done utilizing the assumption that a dependency will receive subsidies from its administrative parent that are proportional to its contribution to total Landed Value.

For example, where a geo-political entity (administrative country) consists of a major continental population and two overseas dependencies, the total subsidy is split among the parts using the expression:

$$Subsidy_i = \frac{LV_i}{\sum_{i=1}^{3} LV_i} \cdot Subsidy_I$$

(3)

where *Subsidy_i* is estimated for the geo-political aggregate (administrative country) as described above. Where we have disaggregated an entity's subsidy among its dependencies, the values will be reported as estimates (i.e., in parentheses) even for Type I data when values are known.

References:

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