



FUEL TAX CONCESSIONS IN FISHERIES: MEASUREMENT AND EVIDENCE

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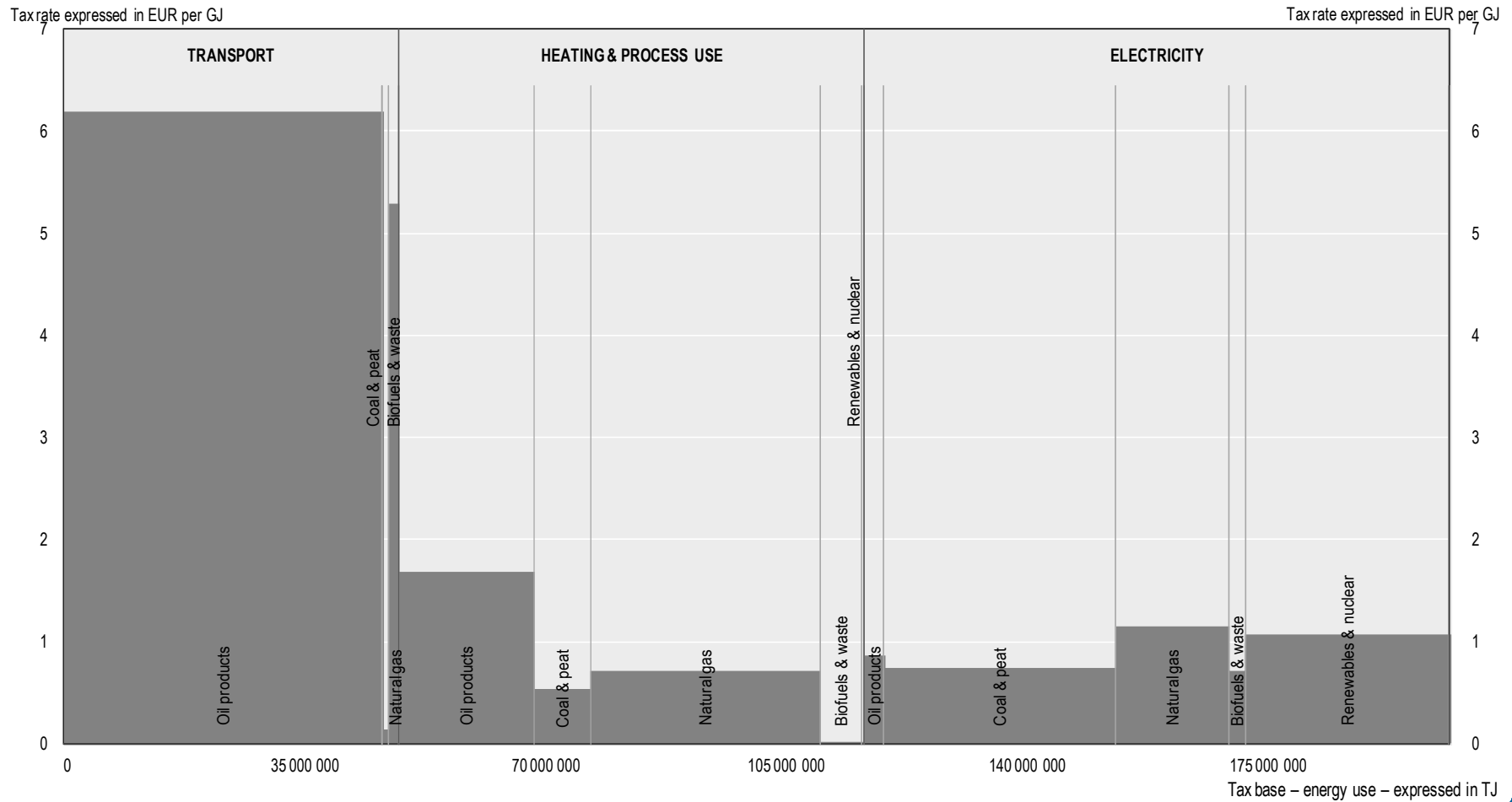
OECD has been working on fuel tax concessions for some years

- Study on FTCs in OECD countries (2010)
- Study on determinants of energy use in fisheries (2012)
- Ongoing work on Green Growth and Energy Policy



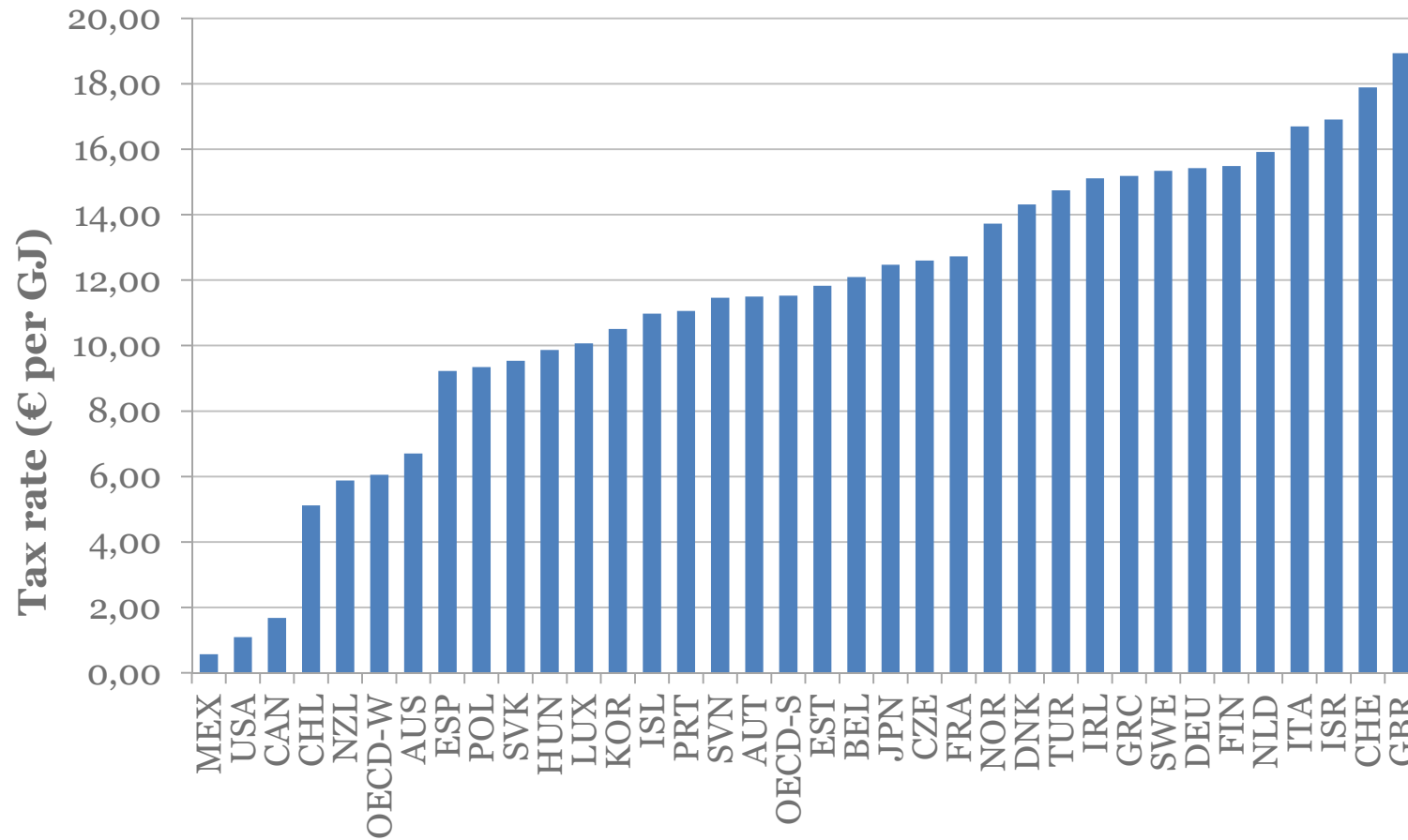


Taxes on energy vary across uses





And they also vary across countries for the same use—here transportation





And fisheries share exemptions with industrial or non-road uses of fuel

OECD average tax rates on transport fuels, EUR/GJ

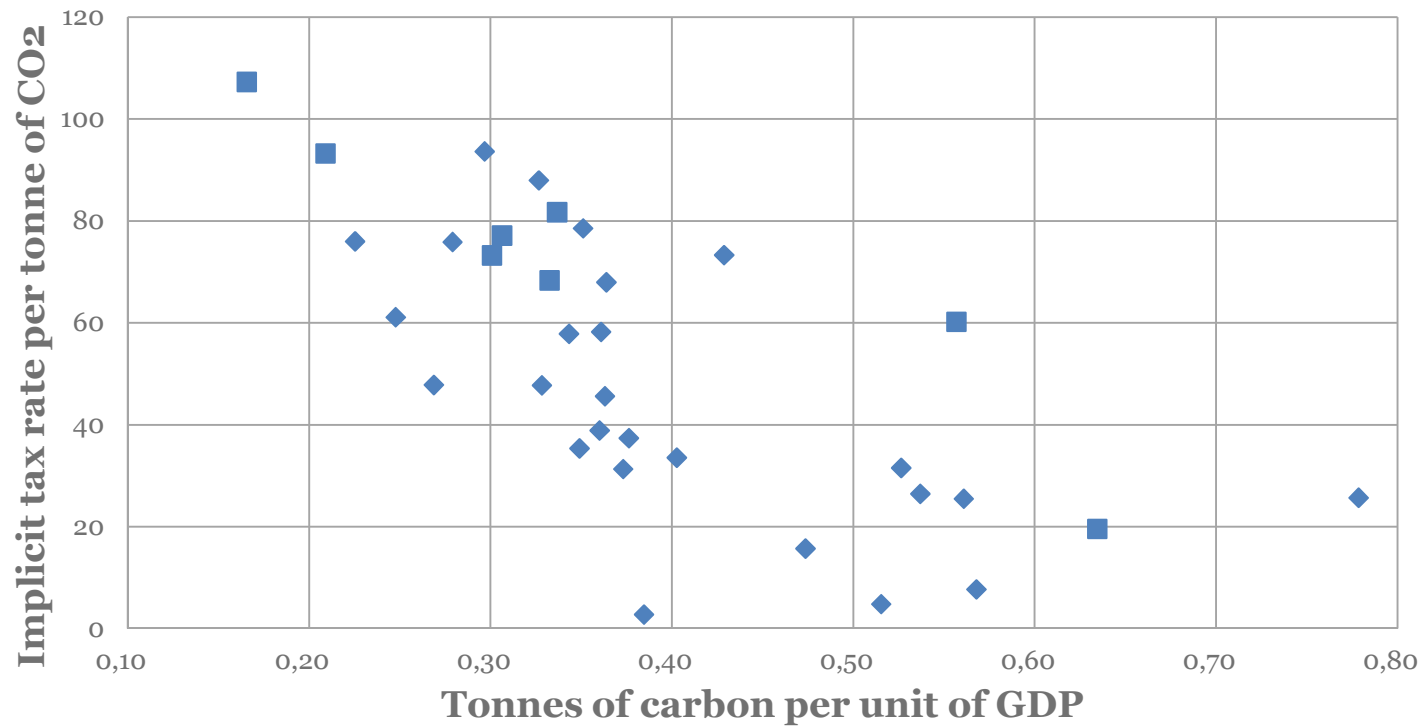
		GASOLINE	DIESEL	ALL FUELS
	% OF BASE	53%	34%	100%
ROAD USE	90%	15.5	10.5	12.2
NON-ROAD USE	10%	1.0	4.4	2.9
TOTAL TRANSPORT	100%	15.5	10.2	11.5

Includes
for fishing





The evidence suggests that low taxes encourage energy-intensive output



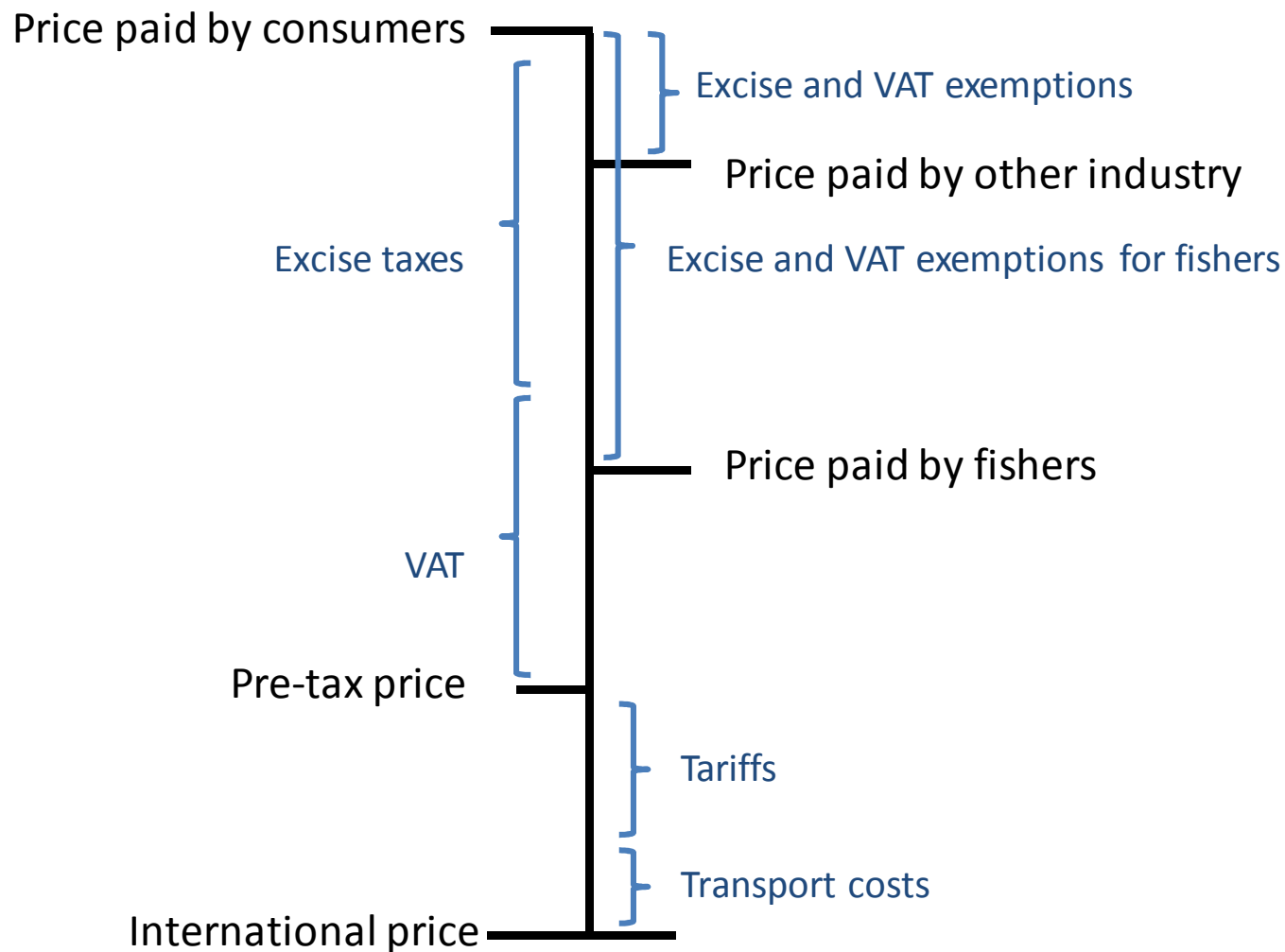


Measurement of Fuel Tax Concessions





FTC measurement begins with a reference point





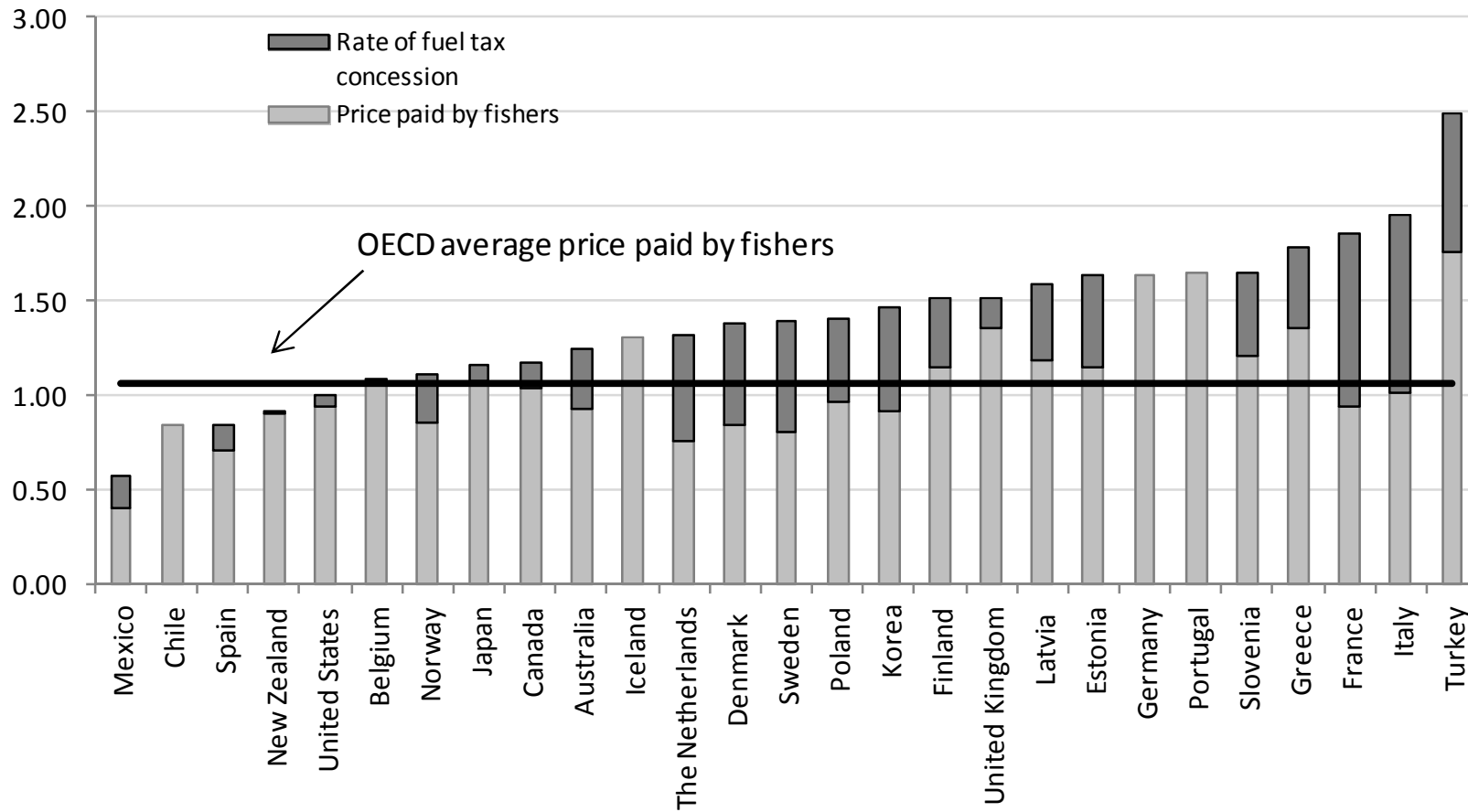
International comparability is very poor because tax systems are different

- Imagine country X taxes petrol at EUR 1/litre and diesel at EUR 0.6/litre and country Y taxes both petrol and diesel at EUR 0.4/litre.
- Country X would report a tax concession of EUR 0.4/litre for diesel and country Y would report nothing, even though the tax rate for diesel in country Y is lower.
- **System with higher taxes will tend to report higher tax expenditures.**



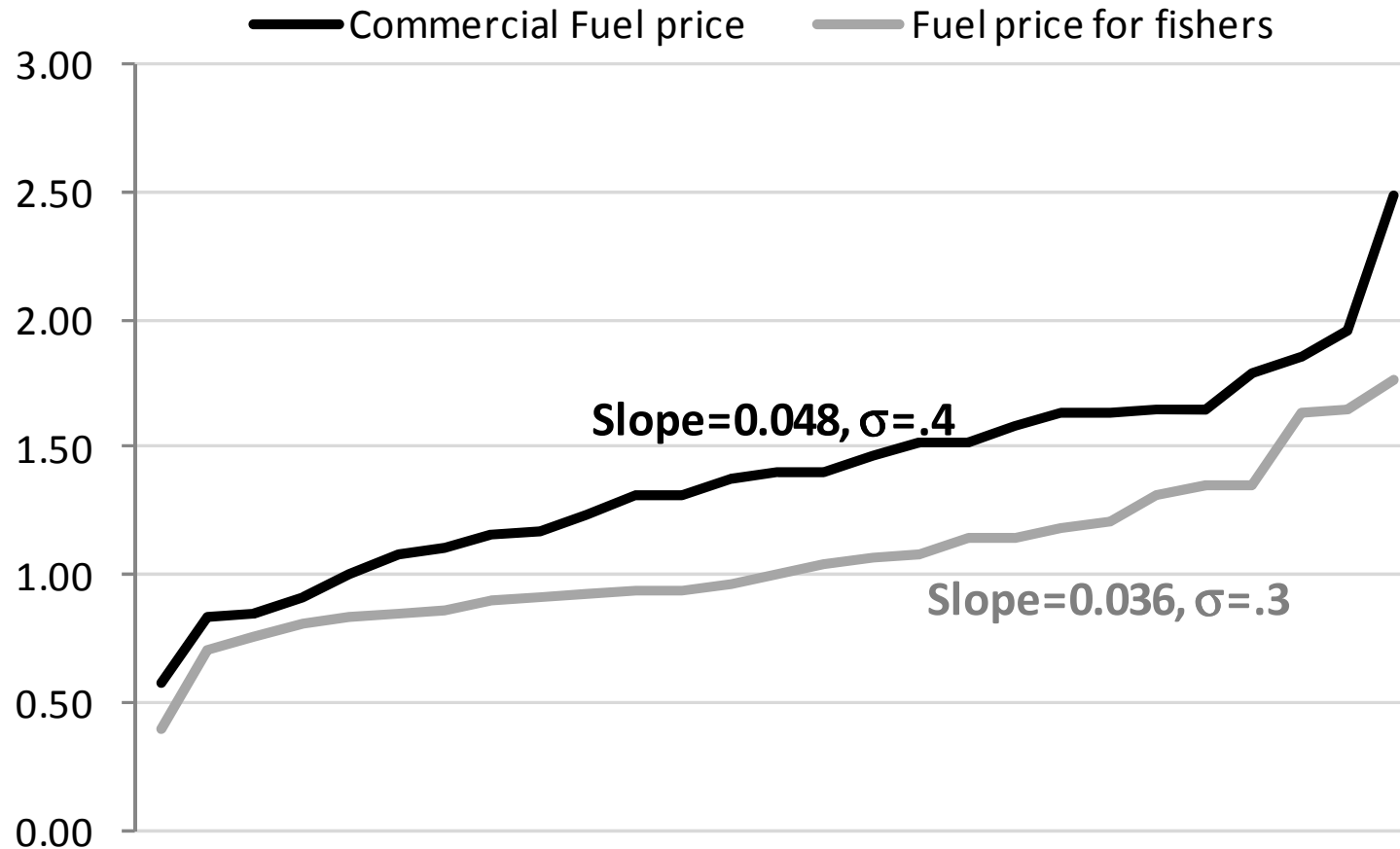


FTCs are common, variable and in general increase with fuel price





There is some evidence that FTCs reduce variation in fuel costs





The value of FTCs is the rate of support times volume of fuel consumed

- The rate of FTCs is hard to estimate because of reference point problems
- Consumption is difficult to estimate because of data problems.





Problems and difficulties

- National fuel statistics not disaggregated
- Fuel purchases by fleets from other nations
- **Direct measurement of fuel consumption by fishing fleets generally does not happen despite the importance of FTCs**





In some cases, fuel consumption was estimated using fleet data

$$\text{Consumption in operation} = \frac{(\text{N}^\circ \text{days} * 24 * \text{Const Yield} * \text{Main Engine Power} * 0.85)}{1000}$$

$$\text{Consumption in port} = \frac{(\text{N}^\circ \text{days} * 24 * \text{Const Yield} * \text{Aux Engine Power} * 0,85)}{1000}$$

- This was how Chile calculated fuel consumption, for example





Sometimes this calculation was augmented by survey data

- In New Zealand, a direct survey was made in 2005 regarding fuel consumption. They sampled 2/3 of the fleet
- This established a fuel use/kw output that was applied to fleet data to estimate fuel consumption.





Others derived an estimate of fuel consumed per quantity landed

- For example, the US estimated this by fishery using trip data.
- This was extrapolated to other “similar” fisheries where no data was available.





In some cases, fuel purchases data was collected from suppliers

- In this case, separating fishing vs. other users of marine fuel must be done via some estimation.
- Also, foreign purchasers of fuel will be included in data
- This was how Norway collected fuel consumption data, for example.
- Some countries (eg. Latvia) do not correct for non-fishing uses in their data





Conclusion: FTC measurement is harder than it looks.

- Reference points to define the rate of FTC are contestable
- Comparisons across countries often are not meaningful
- Data on volume of fuel consumed is usually not directly collected
- **Yet, FTCs in many cases are the most important form of support to fishers**





Fuel tax concessions are a poor policy tool

- Equivalent to a subsidy, but without the transparency, either for the public or the policy maker
- Contradicts broader policy objectives for reduced use of fossil fuels
- Can increase fishing effort and aggravate fishery management problems
- **Other policies can better meet public objectives at lower cost**





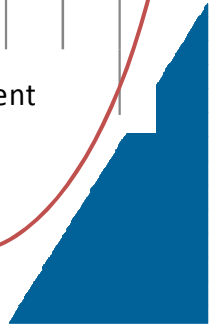
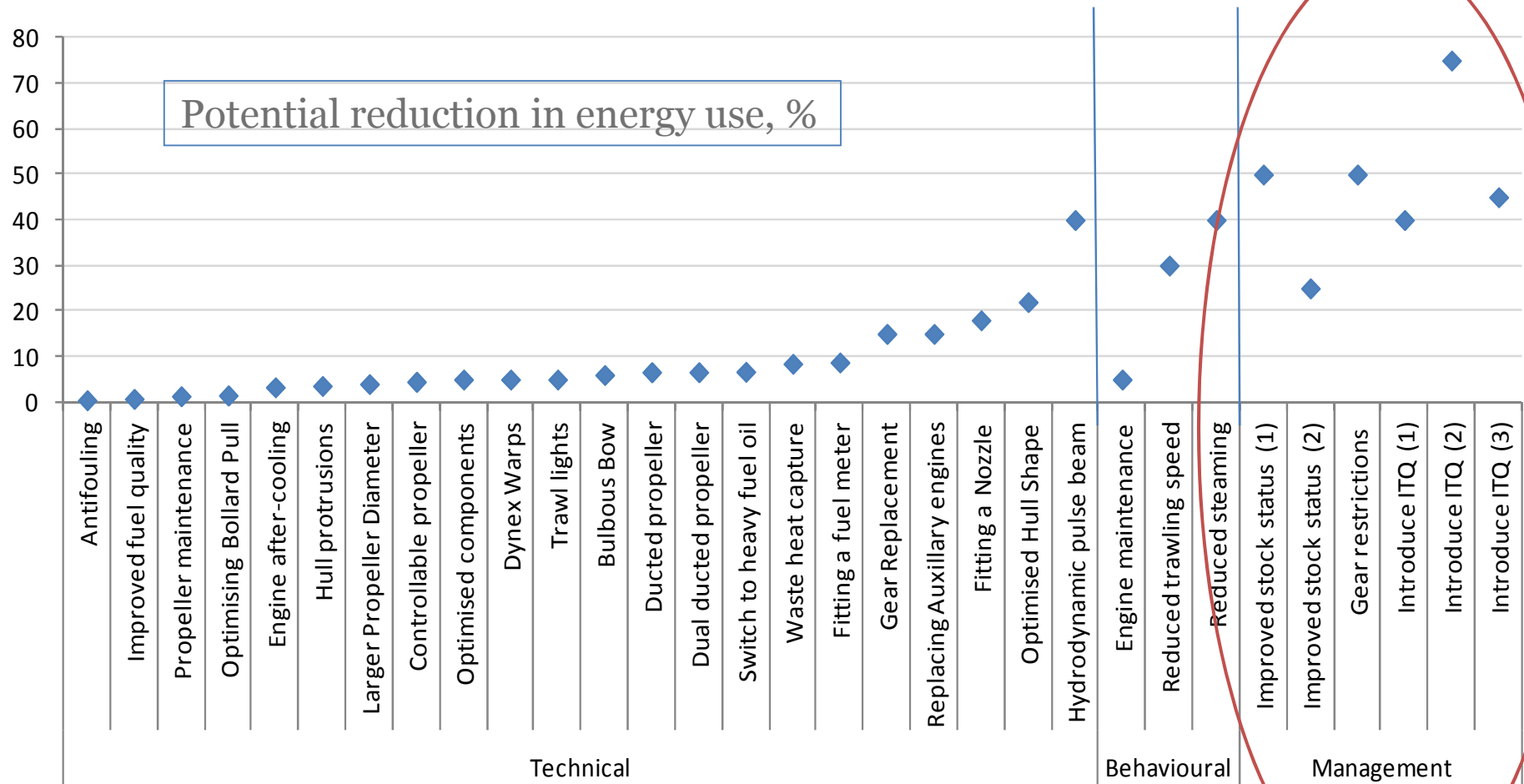
Is sector-based reform possible?

- Fuel tax exemptions are not unique to fisheries and most uses of energy other than retail automobile fuel face low tax rates.
- Therefore, a problem of the tax code in general.
- The marginal damage function of fuel use is the relevant benchmark. For GHG emissions, this is the same for all sectors.







Fuel use in fisheries ultimately depends on the management system in place








Thank you for your attention


 **Taxing Energy Use**
A GRAPHICAL ANALYSIS



 **Inventory of Estimated
Budgetary Support and Tax
Expenditures for Fossil Fuels
2013**



 **OECD Review of Fisheries
2011**
POLICIES AND SUMMARY STATISTICS





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