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Informal Law's Discipline of Subsidies: Variation in Definitions, Obligations, Transparency, and Organizations

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ABSTRACT

Some subsidies (such as for fossil fuels and fisheries subsidies) adversely affect global public goods (such as a stable climate and the maintenance of global fish stocks); others affect global price levels (domestic support for certain agriculture commodities), or have negative consequences for one trading partner. Discipline on subsidies depends fundamentally on the existence of fora to discuss definitions, generate information about the incidence of subsidies, and then to determine whether a particular measure fits the definition and ought to be subject to censure. We take international organizations seriously as fora for generating "law" not simply as an exercise of power or coercion, and we explore a particular view of law. If codification is not the only indicator of law, if one accepts that law also emerges in social interaction, then we must attend to the less formal places where the law of subsidies emerges, and perhaps has its effects on state actions. Our analysis of where disciplines might be found is based on a three-level set of comparisons: (i) Within the WTO, involving horizontal compared to sectoral disciplines; and dispute settlement compared to committee and other peer-review processes; (ii) the WTO compared to, and in complement with, other international organizations addressing particular sectors; and (iii) international organizations compared to, and in complement with, NGOs. We provide four case studies involving subsidies: (i) export credits, (ii) shipbuilding, (iii) fisheries, and (iv) fossil fuels. We assess variation in definitions, obligation, data and organizations across these case studies and the impact of such differences in the development of subsidy disciplines.

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LIST OF ABBREVIATIONS

AoA	Agreement on Agriculture
APEC	Asia-Pacific Economic Cooperation
ASCM	Agreement on Subsidies and Countervailing Measures
CTE	Committee on Trade and the Environment
ECA	export credit agency
ECG	Export Credits and Credit Guarantees
EU	European Union
FAO	Food and Agriculture Organization
G-5	Group of Five
G-20	Group of Twenty
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GFT	Government Financial Transfer
GSI	Global Subsidies Initiative
IEA	International Energy Agency
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contributions
IOs	international organizations
IPOA	International Plan of Action
IUU	illegal, unreported and unregulated
NAFTA	North American Free Trade Agreement
NGOs	non-governmental organizations
OECD	Organisation for Economic Co-operation and Development
PTAs	preferential trade agreements
SCM Committee	Committee on Subsidies and Countervailing Measures
SDGs	Sustainable Development Goals
SPS	Sanitary and Phytosanitary
TBT	Technical Barriers to Trade
TRP	Trade Policy Review
TPRB	Trade Policy Review Body
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNFCCC	UN Framework Convention on Climate Change
US	United States
WP6	Council Working Party on Shipbuilding
WTO	World Trade Organization

INTRODUCTION

Subsidies create transnational externalities, either through providing advantages to certain traders or through adversely affecting global public goods, but disciplining such government support through formally binding rules is notoriously difficult. Are informal rules an alternative? We are interested in informal legal disciplines because we believe that a focus on formal codified law is insufficient for understanding how law develops and has effects on social understandings and practices. We wish to assess how such informal legal disciplines have an effect in creating common international disciplines on the use of government subsidies.

The first challenge for disciplining government subsidies is defining them. Any government expenditure is a subsidy; even revenue forgone in the form of tax breaks is a subsidy. But states have been working for decades to agree on a definition of "subsidy" for trade purposes. Governments have commonly used subsidies over time for developmental purposes. Nobody would imagine that all such expenditure should be subject to international obligations. And yet subsidies can be a significant source of international conflict. Some subsidies (such as for fossil fuels and fishing subsidies) adversely affect global public goods (such as a stable climate and the maintenance of global fish stocks); others affect global price levels (domestic support for certain agriculture commodities), or have negative consequences for another country's trading interests.

Subsidies have been subject to disciplines in the trading system since the original General Agreement on Tariffs and Trade (GATT) in 1947, but we face the paradox that the current and much more sophisticated version of those disciplines in the Agreement on Subsidies and Countervailing Measures (ASCM) might be both too constraining, and too loose. On the one hand, the rules of the World Trade Organization (WTO) as interpreted by the Appellate Body might interfere with legitimate policy measures, such as supporting the development of renewable energy. On the other hand, despite years of negotiations, Members have not agreed on disciplines for fisheries subsidies; and fossil fuel subsidies, perhaps the most pernicious of all, are hardly disciplined. Do less formal mechanisms at the WTO or elsewhere help provide effective discipline? Where do they, or might they, work?

We take international organizations seriously as fora for managing the trading system, we think about what they do as generating "law," not simply as an exercise of power or coercion, and we explore a particular view of law. Legal positivists distinguish between hard and soft law with a binary binding/non-binding dichotomy (Shaffer and Pollack 2010). Hard law is then defined as enforceable rules with precise codification and a tough enforcement system. The "legalization" of the WTO compared to the GATT is therefore said to represent a transition from a 'soft law' to a 'hard law' system (Abbott and Snidal, 2000). Hard law is used to refer to "enforceable" rules while soft law, or "non-binding" law, means indicative standards. Analysts use the term "soft law" to recognize as "law" things that can be legal in their effects yet involve neither state legislation nor an international treaty. Some scholars use the term "informal" with respect to law to capture three distinct but often combined features: the involvement of (i) non-traditional actors (not just states, but also regulators, public agencies, central banks, expert groups, cities, business and NGOs), (ii) non-traditional processes (not treaty-making in formal international organizations [IOs] like the WTO but in networks, arrangements or groups), and (3) non-traditional outputs (not treaties, but standards, guidelines, principles or arrangements). (Pauwelyn 2014: 742)

Other scholars (Shaffer and Pollack 2010) refer to "informal" law that involves guidelines, standards, declarations, and informal monitoring and peer-review processes. Legal pluralists go further, arguing that while commitments may vary in their degree of formal codification and their justiciability, neither explicitness nor courts are necessarily indicators of "law" if actors recognize a provision as legal and act accordingly (Fuller 1969; Macdonald 2005; Wolfe 2005). The Organisation for Economic Co-operation and Development (OECD), for example, has no formal dispute settlement system, yet signatories act "as if" certain obligations are binding, such as, for example, the Arrangement on Officially Supported Export Credits discussed below. If codification is not the only indicator of law, if one accepts that law emerges in social interaction (Brunnée and Toope 2010), then we must attend to all the places where the law of subsidies emerges, and perhaps has effects on state actions.

Global governance can be viewed as operating through different mechanisms, such as coercion, reciprocity, learning, and socialization. Informal law, although often viewed as working through the latter two mechanisms, can work through all four. It can lead to social sanctions (such as consumer boycotts), or affect financing (such as from the International Monetary Fund [IMF] or World Bank), and thus work through coercion. It can work through reciprocity such as in WTO and OECD peer-review systems based on reciprocal commitments, with reporting, monitoring, and evaluation. It can lead to policy learning through information sharing and deliberation. And it can lead to social emulation and model mongering affecting practice. The choice of mechanism will depend on how actors understand the problem, and on what they are trying to achieve.

Before law can play any role, its subjects must reach a consensus on diagnosing the problem that law is designed to address. Discipline on subsidies depends fundamentally on the existence of fora to discuss definitions, generate information about the incidence of subsidies, and then to determine whether a particular measure fits the definition

and ought to be subject to censure. In the trading system, the WTO provides a forum, but there are others, such as the Group of Twenty (G-20), the OECD, the IMF, and informal networks organized by non-governmental organizations (NGOs) and other stakeholders. The success of the processes will depend on generating trustworthy data, identifying the relevant actors, and providing a forum for bringing them together. The monitoring of whatever rules are agreed requires ongoing deliberation to ensure convergence of normative understandings as applied to particular contexts, and concordance between international norms and local practice.

Information, and discussion of that information, in some sort of body provide an opportunity to learn from the experience of other countries and to consider whether government support serves a legitimate policy objective, or whether it is an attempt to manipulate the terms of trade at the expense of firms in other countries. The notion that transparency matters is based on the idea that sunshine can discipline the actions of states (Mavroidis and Wolfe 2015). The idea that sunshine is the best disinfectant assumes that agents whose actions are exposed will hew more closely to shared understandings of the common good (Brandeis 1914). If not, then other agents provided with information can exercise appropriate discipline. Sunshine in itself enables but does not cause change. In this view of agency, sunlight contributes more to social order than does coercion. Sunlight plays this role in the trading system by reducing information asymmetries. That is, individual governments know what they are doing (though not what all parts or level of government are doing!) but firms, citizens, and trading partners do not know. Information understood in this way is a public good, and one that is likely to be underprovided. Even if the subsidy is legitimate, the public has a right to know, and other governments both need to be assured that the measure is legitimate and can learn from the policy experience of others.

Organizations have comparative advantages, and issue areas vary in their characteristics, so that some organizations may be relatively better suited for some issue areas than others. In thinking about choice of international organization, one can think about variation in what makes a subsidy an international issue, such as whether it affects trading partners, or undermines global public goods. One can also ask whether the issue concerns analysis of good public policy, or the need for transnational policy learning. This paper begins by addressing the first concern, where it turns out that parties do not have to do everything at the WTO, and it then addresses the second concern in two of its cases studies, where disciplines are thought desirable and might be feasible.

Our analysis of where disciplines might be found is based on a three-level set of comparisons.

1. Within the WTO, involving cross-cutting (horizontal) compared to sectoral disciplines; and dispute settlement compared to committee and other peer-review processes.

2. The WTO compared to, and in complement with, other international organizations addressing particular sectors, notably the OECD, and including variation within the OECD.

3. International organizations compared to, and in complement with, NGOs.

In our comparison across case studies, we consider variation on the following dimensions.

1. Definition of subsidies, which can be a proxy for the degree of consensual understanding in a sector.

2. Obligations, which are necessarily subsequent to a definition of subsidy within a sector.

3. Data, which vary by source, quality, and how much transparency is provided to other governments, and the public.

4. Organizational characteristics, which vary in terms of opportunities for learning, surveillance, and dispute settlement.

The plan of this paper is as follows. Section 1 discusses the contribution of transparency and surveillance to the horizontal discipline of subsidies in the WTO (although for agriculture, see Josling 2015). Section 2 presents four sectoral case studies involving organizations other than the WTO, which respectively address the OECD export credit arrangement, OECD shipbuilding initiatives, various initiatives on fisheries subsidies, and various initiatives on fossil fuel subsidies. Section 3 addresses the role of NGOs in relation to international organizations. The paper concludes by asking: What works?

HORIZONTAL SUBSIDY DISCIPLINES IN THE WTO

The dispute settlement system is thought to be the jewel in the WTO crown, the means of enforcing the rules. But here is the puzzle—while subsidies have been the subject of 103 complaints in the WTO, constituting 21 percent of all disputes, and 25 percent of the cases resulting in a Panel or Appellate Body decision, the number of cases filed is minute relative to the volume of state aids and world trade. Disputes are the small tip of a large pyramid of conflict management mechanisms in the WTO (Horn et al. 2013; Wolfe 2013). A focus on disputes as enforcement of hard law obscures the other, perhaps more important though less formal, aspects of the WTO contribution to subsidies discipline.

In the WTO, transparency and monitoring provisions are primarily focused on helping to ensure that existing commitments are met. They can, in theory, however, also lead to new knowledge that can lead to changes in the rules, their interpretation and practices, including by giving rise to new understandings among policymakers. Transparency in the trading system means the "degree to which trade policies and practices, and the process by which they are established, are open and predictable."[1] This WTO Glossary definition necessarily requires choices both about how to be transparent, and what to be transparent about. It refers to a number of inter-related actions, including how a policy or rule is developed domestically; how the policies and rules are implemented and applied; and how the policy or rule is published. Three actions are especially important for the operation of transparency in the WTO regarding subsidies—how the other Members of the WTO are notified of the new policy action; how a notification is discussed in Geneva; and whether the results of the Geneva process are published in a way that allows citizens to hold their government accountable for its use of public money.

In the WTO Glossary, a "notification" is defined as "a transparency obligation requiring member governments to report trade measures to the relevant WTO body if the measures might have an effect on other Members." The basic principles were codified at the creation of the WTO, based on GATT practices that had been evolving since 1947 (Bacchetta et al. 2012; WTO 1995). In previous work, Collins-Williams and Wolfe (2010) showed how the record of industrial subsidies notification under the ASCM was poor.[2] It still is. As shown in Table 1, more than half of the Members are still not notifying their subsidies. Some Members have not submitted a notification for many years, and Members question the comprehensiveness of the notifications that have been submitted. While some notifications run to hundreds of pages, others are very brief.

In the face of continued weak notification, the chair of the Committee on Subsidies and Countervailing Measures (SCM Committee) began reading out the names of Members who were late. When that did not improve the rate of notification, he invited all of the Members who were late to explain the delay to the committee. Among the most important players invited to offer such explanations at the April 2012 meeting were China, the European Union (EU) (on behalf of Austria and Greece), India, Indonesia, Nigeria, South Africa, and Thailand. The excuses offered included technical and capacity constraints, and coordination difficulties. In April 2013, the SCM chair listed the 71 Members that had not made 2011 notifications, including four of the top 30 merchandise exporters — China, Indonesia, Thailand, and the United Arab Emirates (WTO 2013a, 2013b).

Why do Members not notify subsidies? Four reasons can be advanced. The first is bureaucratic incapacity, which may be the case for many developing countries whose trade ministries are understaffed and lack resources. Second, Members might worry about providing adverse information for a potential legal dispute, perhaps about a measure they suspect might be illegal. By notifying, they provide information that a trading partner might not have, and they admit that the measures might be actionable.

1 WTO, Glossary, see http://www.wto.org/english/thewto_e/glossary_e/glossary_e.htm. For a detailed discussion of definitions, see Box B.1 in WTO (2012b).

2 The record is little better on agriculture subsidies—see Josling (2015) in this E15 project.

TABLE 1:

Status of Subsidies Notifications

Source: WTO (2014a), Table 21

	2007	2009	2011	2013
Members that notified subsidies	46%	46%	45%	37%
Members that made a "nil" notification	8%	14%	14%	11%
Sub-total notifying Members	54%	60%	59%	48%
Members that did not make any notification	46%	40%	41%	52%

Third, Members' trade authorities find it easier to notify actions taken by themselves (like the number of new dumping investigations commenced by the commerce department) than data on, for example, subsidies offered by other ministries, or other levels of government. The fourth reason, and perhaps most important, is ambiguity about what to notify. The ASCM has no preamble stating the objects and purposes of the agreement that could provide contextual guidance for interpretation. Some observe that the ASCM's very vagueness allowed it to be concluded in the first place, so that, in part, it constitutes the recording of a disagreement.

The definition of a subsidy determines what must be notified. The first part of the definition in Article 1.1 of the ASCM requires a financial contribution or price or income support provided by the government. The second part of the definition, Article 1.2, requires that a benefit be conferred to the recipient, which entails an exercise of comparison between a situation where a recipient receives the financial contribution and one where it does not. The ASCM classified subsidies as either prohibited, actionable, or non-actionable. Two categories of subsidies, import substitution and export subsidies, are prohibited (Article 3). For a Member to take action against a "harmful" subsidy of another Member that is actionable, it has to be specific (Article 2) and the adverse effects have to be demonstrated (Article 5 and 6).

The SCM committee's notification questionnaire, therefore, requires Members to notify "a) all *specific* subsidies … and b) all other subsidies, which operate directly or indirectly to increase exports" (emphasis added). The legal text and the jurisprudence fail, however, to clarify the conditions under which subsidies are specific, perhaps because the concept lacks solid economic justification (Rubini 2009: 359–66). What also makes determining notification obligations difficult is that part of the questionnaire that requests "Statistical data permitting an assessment of the *trade effects* of the subsidy" (emphasis added). Whether a subsidy has trade effects requires a judgment by the notifier, one that does not lend itself to a quick assessment by government officials. Moreover, such data may be perceived as a confession inviting a dispute, and thus, not surprisingly, are rarely provided (Collins-Williams and Wolfe 2010). Given the different, incomplete, and sometimes unclear notifications that Members have submitted to the WTO, it seems that they are confused about what the definition covers and, as a consequence, are unclear on which subsidies they ought to notify. Rubini (2012) concludes that all subsidies should be notified to the WTO, allowing questions to be asked in the committee. But given the risk that understandings reached in the committee might be seen by the Appellate Body as having the status of "subsequent agreement" in the sense of Article 31 of the Vienna Convention on the Law of Treaties, as happened in US-Tuna II, Members might be reluctant to go that far.

The committee process ought to be central. As a result of questions and challenges posed before the SCM Committee, a government may provide more information, change policy, or pressure other units of government to respond. The committee is mandated (ASCM Article 26) to examine subsidy notifications on a regular basis. The agreement also has two provisions for "reverse notification" pursuant to which Members may request information on subsidies that they think another Member was obliged to notify (Article 25.8), and can notify measures that they think a trading partner should have notified (Article 25.10). The United States (US) has submitted extensive reverse notifications of Chinese and Indian subsidies, but few other Members have the capacity to generate such analysis of another Member's policies.

Members differ hugely in their ability to ask questions in the committee. Collins-Williams and Wolfe (2010) found that a small number of Members consistently asked questions in the SCM and Agriculture committees in 2007–08, and were also consistently targets. The nearly 900 questions asked in the SCM Committee from 2008 to 2012 were asked by only 16 Members, all but two of whom are G20 countries, but the questions were posed to 58 Members (counting the EU as one).[3] This disparity shows most clearly in the bars on the right of Figure 1—other developing countries receive many more questions than they pose.

Figure 2 shows what these questions concerned. Noteworthy is how seldom Members ask about trade effects, and how often they ask about eligibility and local content—about specificity, in other words. We have not investigated whether the questioners were satisfied with the answers, or whether the answers clarified the matter, or provided the information necessary to launch a new dispute. Informality can be hampered by a fear that comments made in a committee discussion, or even accepting that the matter was a legitimate subject for discussion, might form the basis for a ruling in a subsequent dispute.

3 These numbers were compiled by Robin Fraser from SCM Committee minutes and other documents. Counting "questions" before WTO committees requires arbitrary judgments, and will lead to some inconsistencies between counts of questions posed by a particular Member, and questions directed at a given Member. In the SCM Committee, where more than one delegation at the same meeting raised questions or concerns about a particular subsidy program maintained by a given Member, Fraser counted one question directed at the targeted country, but, for the purpose of counting questions by the requesting countries, he counted each delegation's question separately, even if it concerned the same subsidy program. For example, if Canada, the EU, and Japan each asked questions about the US Fisheries Finance Program, he counted three questions, one each by Canada, the EU, and Japan, but only one (rather than three) directed at the US. Multiple questions asked by one delegation of one subsidy program is counted as one question. Where a delegation named multiple subsidy programs under the heading of one written question, he counted only one question.

Subsidies are often mentioned in preferential trade agreements (PTAs), but the disciplines are weak, and PTAs generally do not create either notification requirements for subsidies, or a body where such notification could be reviewed. PTAs also lack a secretariat able to support a robust transparency process, which could be a reason PTA partners rarely use their anemic dispute settlement provisions. Not surprisingly, therefore, PTA partners make good use of WTO mechanisms. Since 2008, eight of the 16 Members that posed questions in the SCM Committee posed them to a PTA partner. Only three of the 59 questions asked by Australia went to its PTA partners, but 46 of 126 questions posed by Canada went to the US, its North American Free Trade Agreement (NAFTA) partner, and the EU and the US asked each other 128 of the 880 questions posed in the committee (98 were questions the US posed of the EU, and 30 were questions the EU posed of the US).

TRADE POLICY REVIEW MECHANISM

A helpful alternative forum within the WTO to generate more information about subsidies with an opportunity for discussion is the Trade Policy Review Body (TPRB). The central objective of the TPRB is "to contribute to ... the smoother functioning of the multilateral trading system, by achieving greater transparency in, and understanding of, the trade policies and practices of Members." The TPRB generates three sorts of reports—(i) the periodic Trade Policy Review (TPR) of each Member (WTO 2011: para. 178 onwards); (ii) the annual review of the state of the trading system; and (iii) the monitoring reports on measures taken in response to the financial crisis. In these reports to the TPRB, issued on the authority of the Director-General (and not of Members), the Secretariat sometimes warns or expresses

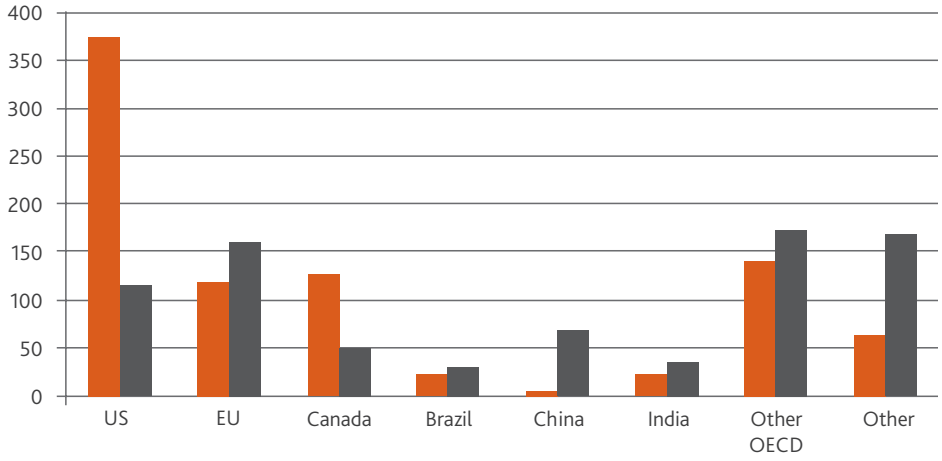

FIGURE 1:

Questions in the SCM Committee (2008-2012)

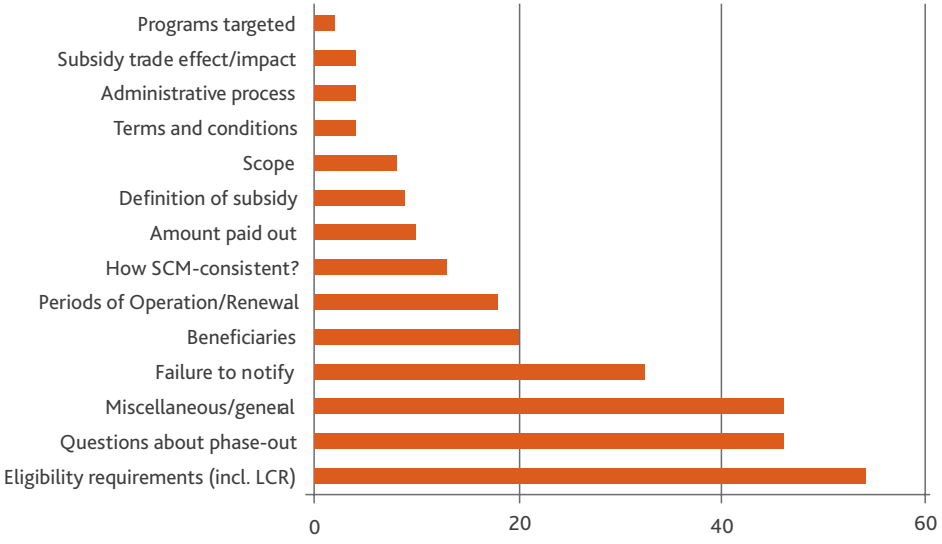

FIGURE 2:

Categorization of Questions Asked in 2009-2010

Source: WTO, SCM Committee.

concerns on the basis of its analysis, but never criticizes Members explicitly, and never comments on their rights and obligations under the WTO agreements. Discussion in the TPRB therefore does not imply either that a measure is or is not actionable.

The core of each TPR report is based on notifications from Members, but each report builds from a far wider range of information. The Secretariat collects data from official sources (questionnaires to Member under review) and non-official sources, including from other international organizations, media reports, and NGOs (Chaisse and Matsushita 2013; Ghosh, 2011: 431; Hoekman 2011: 18–19). To ensure accuracy, the Secretariat seeks verification of the data from non-official sources when discussing the draft of its report with the Member (WTO 2011: para. 180). Given the difficulties devising disciplines regarding subsidies of service providers under the General Agreement on Trade in Services (GATS), and thus the lack of notification obligations under it, we only know about services subsidies because of those that surface in TPR reports (WTO 2013c).

Subsidies clearly increased after the 2008 financial crisis and they have been a particular concern in the crisis-monitoring exercise of the TPRB because of their effects on the trading system for good as well as ill. Annex 4, added to the WTO annual monitoring reports in response to the financial crisis, is a valiant attempt to address subsidies (called "General Economic Support Measures"), although the Secretariat observed that assessment is inevitably biased because of the paucity of information provided by Members, sometimes because they claim in response to the Director-General's questionnaire that the relevant supports are not "new measures" and hence not covered by the process (WTO 2012b). While the reports are one of the few sources of systematically collected subsidies data, they are not strictly comparable, the Secretariat observes, because absence or presence of data in the report on any one country may be an artifact of information problems, rather than an indication that the Member does or does not maintain such subsidies (WTO 2012: para. 118). TPR reports on individual Members face the same difficulty, showing considerable variation in coverage of the major economies. A recent report on the EU had seven pages on subsidies and government assistance, and that on the US had four pages under "Other Measures Affecting Investment and Trade." The Japan report had four paragraphs on "Subsidies and other financial assistance," the Korea report only briefly touched on export subsidies. The TPR for China (WTO 2012a) has more than three pages about "Subsidies and other government assistance," but notes that "very few details are available on China's subsidies and other government assistance, particularly at the sub-central level, on their type and size, the financial outlays involved, and the objectives of the programmes and their results." In contrast, coverage on subsidies issues was not obvious in the reports on Brazil, Mexico, and Indonesia, though the latter in particular is known to be a heavy provider of fossil fuel subsidies.

The coverage of subsidies in TPR reports may reflect the extent to which the Secretariat sees the issue as a challenge for the country, but it could also be a reflection of the reluctance of Members to provide information. Mavroidis and Wolfe (2015) think that where notification is weak, the Secretariat should act as the "common agent" of all participants in the trading system, actively seeking information. For example, the TPR of Malaysia in 2014 used public sources to go well beyond the country's 2009 and 2011 SCM notification, and the US 2012 reverse notification, to demonstrate that the country was one of the most heavily subsidized in its region (WTO 2014b).

In sum, informal mechanisms can have bite, but they depend on social interaction. When drafting the ASCM, negotiators worried that some legitimate government measures might meet the test of being a subsidy, but should not face sanction in the dispute settlement system, and so they created a category of "non-actionable" subsidies in Article 8. That provision lapsed after five years, and will likely not be recreated in any future negotiations because of fears of abuse (Casier et al. 2014). Yet that provision can still reflect a normative understanding among Members even though it is not formally in effect. For example, Article 8 covered government support for research. Such support is ubiquitous, which might lead one to think that it risks being subject to countervail. And yet in all the years since Article 8 lapsed, government support for research came up only a handful of times in questions in the SCM Committee, and seems to be mentioned in formal disputes only in the infamous Boeing-Airbus saga. We suggest that this tacit acceptance of support for research is a case of Members acting "as if" the subsidies are covered by the now lapsed provisions of Article 8—the "non-actionable" category lives on implicitly in Members' understanding of appropriate policy. That is, this is an instance of what could be called Members' social understandings of WTO law that diffuse throughout the WTO community (Brunnée and Toope 2010: 34, 38, 64, 101; Fuller 1969: 106). It can be argued, therefore, that the interactional opportunities for the development and affirmation of a shared understanding of what fidelity to WTO obligations entails allows actors (or at least, active participants who represent a subset of the membership) to know what the WTO law is without formal amendment of the treaty or an Appellate Body decision.

Some WTO committees have a policy-oriented discussion on the margins of the regular committee meetings through which normative understandings of a rule's interpretation and appropriate implementation can be developed. Examples include discussions in the Committee on Sanitary and Phytosanitary (SPS) Measures, the Committee on Technical Barriers to Trade (TBT), and the Committee on Trade and the Environment (CTE) because these committees tend to bring together technocratic officials specialized in particular domains. But such policy discussions do not occur in connection with the SCM Committee. Why not? One reason appears to be constraints on WTO Secretariat resources. But it could also be that governments do not want to discuss the

issues, perhaps for political reasons, or out of concerns about the balance of rights and obligations. One weakness of the WTO, ironically, is its codification of "binding" obligations in a treaty that traders perceive as "hard" law. The result is that amendments, revisions, and new obligations have become difficult, if not impossible, to negotiate.

The substantive aspect of the disciplines also appears to matter, as exemplified by WTO Members' distinct handling of agricultural subsidies. Our discussion so far has focused on the procedural aspects of informal WTO disciplines on non-agricultural subsidies. The distinction between agricultural and non-agricultural subsidies is significant. Export subsidies under GATT 1947 were illegitimate only for "non-primary" products. Contracting Parties were only enjoined to "avoid" applying export subsidies to primary products, and, if export subsidies were applied, they should not result in a Contracting Party having "more than an equitable share of world export trade in that product." At the 1982 GATT ministerial, participants agreed to examine all subsidies affecting agriculture separately, especially export subsidies, and the 1986 Punta del Este declaration maintained that negotiations should aim at "improving the competitive environment by increasing discipline on the use of all direct and indirect subsidies and other measures affecting directly or indirectly agricultural trade, including the phased reduction of their negative effects and dealing with their causes." The eventual 1994 Uruguay Round Agreement on Agriculture (AoA) hived off agriculture subsidies from the ASCM. Efforts to develop further disciplines on agricultural subsidies, especially domestic support, but also on export credits after a failure at the OECD, remain a central element of the Doha Round, to be handled apart from industrial subsidies (see Josling 2015).

The implication of the example of agricultural subsidies is that the general or "horizontal" disciplines of the ASCM may not be suitable for all sectors; experience in other areas suggests that the WTO itself may not be suitable in all sectors. While the 1979 plurilateral Agreement on Trade in Civil Aircraft mentions subsidies, it has never been invoked in a GATT or WTO complaint. The 1992 EC-US bilateral Agreement on Trade in Large Civil Aircraft had strong language on transparency, but weak institutional provisions. The agreement was unilaterally terminated by the US in 2004 when it filed its WTO complaint about Airbus subsidies, but the US cited the subsidies commitments of the bilateral agreement in its WTO complaints. The long-running Canada-US softwood lumber conflict, resulting in numerous WTO and NAFTA disputes, is now subject to a bilateral accord. The special characteristics of the steel and shipbuilding industries led to initiatives for distinct disciplines at the OECD, as did export credits, itself containing both general provisions and sectoral annexes. And, of course, discussion on fisheries subsidies and fossil fuel subsidies occurs in many places in addition to, or instead of, the WTO. In the next section we address such sectoral disciplines.

SECTORAL CASE STUDIES

The law of subsidies should be viewed on a continuum. Collective understandings on the definition of subsidies and mutual obligations may eventually be codified or even adjudicated in the WTO, but those understandings often begin to emerge elsewhere. Other organizations may hold data on the incidence of subsidies that is more comprehensive than that held in the WTO, and these other organizations may be better placed to develop disciplines separately or as a complement to those in the WTO. Only then may these disciplines feed into the WTO peer-review and dispute settlement mechanisms, and these WTO mechanisms may only play a minor role.

We have selected four sectoral cases for examination that represent variation in (i) the conceptualization of the subsidy as a trade or public goods problem; (ii) the number of countries affected; (iii) the definition of a the sectoral subsidy; (iv) the extent of formal obligation; (v) the extent of data and transparent reporting and peer review; and (vi) the organizations addressing the issue. Two case studies (concerning fisheries and fossil fuel subsidies) entail subsidies defined as a public goods problem involving a large number of countries. The other two case studies (concerning export credits and shipbuilding subsidies) entail subsidies defined as a trade problem involving a relatively smaller number of countries. The OECD disciplines in these domains differ in their degree of formal obligation, with export credits being governed by formally non-binding rules, while shipbuilding initiatives aimed (but failed) to create formally binding rules backed by dispute settlement. We first consider the OECD's work on export credits and then on shipbuilding subsidies.

OECD'S WORK ON EXPORT CREDITS

An export credit is a loan issued by a government or private bank that generally allows purchasers to defer payment for industrial products such as capital goods or commercial aircraft. Foreign buyers, typically from less-developed countries, may base their purchasing decision on whether an exporter can provide acceptable financing terms. This financing may be too costly or simply unavailable from commercial lenders due to incomplete information and the risk of default. Export credit agencies (ECAs) are public or semi-public banks that fill these gaps in private export financing by providing loans, insurance, and guarantees at below-market rates. ECAs receive government support in the form of access to treasury funds and public capital markets—subsidies, in other words. These export finance subsidies create trade distortions since buyers make purchasing

decisions on the basis of the export credit terms rather than the price and quality of the goods.

International cooperation on export credit policy began in 1934 with the formation of the Berne Union, a multilateral group of private and state ECAs that sought to reduce commercial risk through the exchange of information on foreign borrowers. Increasing competition in trade finance between Europe and North America in the late 1950s led to discussions for a broader discipline regarding export credits, but decades passed without an agreement. The 1970s financial crisis marked a turning point for these negotiations. Facing large trade deficits due to rising oil prices, nations increasingly subsidized export credits to boost exports, resulting in a sharp increase in ECA lending and affecting national budgets (Moravcsik 1989). In response, trade ministers from the OECD nations convened discussions on export credit regulations at IMF, OECD and Group of Five (G-5) meetings between 1973 and 1976. In 1978, these talks resulted in the first Arrangement on Officially Supported Export Credits (the Arrangement) (OECD 2015). Since 1978, the Participants to the Arrangement (the Participants) have significantly developed the Arrangement to adapt to changing circumstances and to close loopholes. It has helped build a shared social understanding of appropriate export credit practices that have shaped state action.

The OECD's work on export credits consists of two main groups that work in parallel, but largely involve the same national practitioners serviced by the same OECD secretariat staff. The Arrangement formally lies outside of the OECD, but is serviced by the OECD's secretariat. Within the OECD, the Working Party on Export Credits and Credit Guarantees (ECG) was created in 1963 and operates as an official OECD committee. Both the Arrangement and the ECG define export credits as a trade problem involving a group of states. The ECG brings together export credit and trade and treasury officials from all OECD members (other than Chile and Iceland) to review the operation of both member and non-member export credit systems. In March 2015, for example, the ECG published a commissioned study of China's export credit policies and programs. In addition, in response to pressure from NGOs, the ECG has developed principles of good governance on issues such as anti-bribery measures, and environmental and social due diligence.

The Arrangement provides an example of international consensus on a subsidies discipline developed outside of the WTO that does not involve formally binding law. Its Participants consist of a majority of the states that provide officially supported export credit finance—Australia, Canada, the EU (with 20 EU members having ECAs), Japan, Korea, New Zealand, Norway, Switzerland, and the US (art. 3). The European Commission participates alone in the Arrangement, although EU member states participate directly in the ECG. Israel and Turkey are observers at Participants' meetings and Brazil is a full Participant in the Arrangement's Sector Understanding on Export Credits for Civil Aircraft.

The Arrangement is developed and amended via a consensus decision-making process. As a non-OECD agreement, the Participants are not bound by the OECD rules of procedure, allowing for the participation of non-OECD members, thus creating a more informal and inclusive negotiation process (Bonucci 2011). The Arrangement has evolved significantly since its inception, expanding to cover further aspects of trade finance generally, and to address particular sectors through sector understandings. There are currently five sector understandings that cover export credits in the areas of ships; nuclear power plants; civil aircraft; renewable energy, climate change mitigation and adaptation, and water projects; and rail infrastructure. Four of these are not self-contained agreements and must be read in conjunction with the Arrangement. The Aircraft Sector Understanding, in contrast, is a self-contained agreement that operates independently of any of the Arrangement's provisions (OECD 2014). In the past decade alone, the Participants negotiated new or updated sector rules on civil aircraft (2007, 2011), nuclear power plants (2009), renewable energy (2009), water projects (2009), and rail projects (2014) (Drysdale 2014).

The Arrangement has been effective because of its precision, involving clear, comprehensive, detailed commitments, and because of its flexibility, adaptability, and ease of revision to address new circumstances. The Arrangement clearly defines the types of government support measures covered and the most favorable terms ECAs can offer prospective borrowers. These specific, technical definitions remove ambiguity, and thus facilitate implementation and monitoring through the Arrangement's procedures for information exchange and notification (Levit 2004: 105). Repayment terms such as the length of the loan or minimum interest rate are set by specific, technical formulae that automatically adjust based on commercial interest rates and other economic indicators. These automatic adjustment mechanisms allow the Arrangement to maintain its flexibility and relevance despite changing market conditions.

The Arrangement also provides for transparent derogations from its guidelines, subject to compliance with clear procedures based on reciprocal notifications and information exchange. These procedures (art. 47–48) accommodate changing contexts while maintaining trust. Participants must notify other Participants when they intend to offer financing terms that utilize a permitted exception or derogates from the Arrangement guidelines Other Participants then can engage in face-to-face consultations about the derogations (art.18, 42, 45), and they have the ability to match the non-conforming terms and conditions. This notification and match procedure is described as the "heart" of the Arrangement because it tolerates non-adherence to its substantive rules if Participants follow the agreed procedures (Levit 2004: 110). This process recognizes that derogation is inevitable, and so it emphasizes information exchange and transparency while providing procedures that permit matching the derogation to eliminate any competitive advantage. Taken together, these procedures provide a mechanism where Participants can exchange information

and resolve disagreements before a transaction is finalized, building trust and giving Participants the confidence that the rules are being followed (Drysdale 2014).

Participants also can use an enquiry procedure (art. 55–56) to ask other Participants about the most favorable credit terms and conditions they would be willing to support in a given transaction, as well as information regarding third-party countries, institutions, and methods of doing business. ECAs can then use the enquiry responses to gather information on how best to structure and evaluate their own financing packages. This process gives Participants access to "real time transparency" by providing a procedure and a forum for the timely exchange of confidential transaction data (Drysdale 2014).

The status of the Arrangement within the OECD and as a commitment is one of "useful ambiguity."[4] As a "Gentleman's Agreement among the participants" (Chapter 1.2), the Arrangement is not an Act of the OECD, although the OECD Secretariat provides administrative support. The "soft" nature of the Arrangement works to its advantage by lowering the bar to commitment for the Participants. Because the instruments are not formally binding, they can more easily be reviewed, modified, amended, and strengthened (Bonucci 2011).

The Arrangement and ECG engage a small, close-knit, technical group of government officials engaged in export credit practices, the ECAs themselves. Their constant interaction facilitates adaptations and revisions of the Arrangement over time, as well as its incorporation into domestic laws and regulations. Officials from ECAs participate in delegations alongside national trade and treasury representatives. As a result, the instruments are developed and implemented by practitioners. This technocratic network of ECA officials has developed a sense of camaraderie and collegiality over time. Repeated interaction through the notification and consultation procedures builds trust, since these procedures magnify the reputational and professional costs of non-compliance (Levit 2004: 107).

The Arrangement has shown how formally non-binding law can be highly effective through being implemented in national law and practice. The Arrangement has been implemented in whole or part, directly or by reference, into the laws and regulations of the EU, US, and other Participants.[5] Countries also have adopted rules to implement the sector understandings, including Brazil for aircraft subsidies. Most importantly, the Arrangement and sector agreements have affected the understandings of appropriate credit practices in the ECAs themselves. These instruments thus can be viewed as helping to create a transnational legal order since the law is not limited to the international plane but includes domestic law and agency regulation and practices (Halliday and Shaffer 2015). In other words, even though the Arrangement and sector understandings are formally non-binding, they work because they have been implemented into domestic rules, understandings, and practices as applied by ECAs. Levit's detailed study of ECA financing programs found that Participant compliance with the Arrangement was "high, sustained, and steady throughout the Arrangement's life" (2004: 94). To date, only one export credit dispute among the Participants has reached the WTO, and it involved shipbuilding where the understanding is less precise (Drysdale 2014).

Although the Arrangement has limited participation, in 1995, it was incorporated by reference as a carve out to the illustrative list of prohibited export subsidies set forth in Annex 1 of the ASCM (as item k). It has, in this sense, become multilateralized. Any WTO member who acts within the framework of the Arrangement, even without being a formal Participant to it, would be deemed to comply with WTO obligations. In this way, the Arrangement has become a worldwide standard (Bonucci 2011). WTO panels have addressed the Arrangement in aircraft subsidy disputes, such as between Canada and Brazil, which in turn has led to revisions of the sector understanding, as well as Brazil's joining the sector understanding on civil aircraft.

This multilateralization of the Arrangement, without the participation of all affected countries, has raised legitimacy challenges, especially as these countries become more economically important in the trading system. Moreover, as emerging economies, such as China, Brazil, and India, increase their shares of global trade, the Arrangement and sector understandings could unravel unless they join them or follow their rules. Currently, Brazil, China, Colombia, India, Iran, Israel, Jordan, Mexico, Russia, Sri Lanka, Turkey, Indonesia, Argentina, Ecuador, Zimbabwe, Singapore, Oman, Thailand, Trinidad and Tobago, Hong Kong, Uzbekistan, and South Africa are not formal participants in the Arrangement, but have officially supported ECAs (Esty 2010). Since these non-Participant ECAs have not undertaken commitments under the Arrangement, they may provide repayment terms and interest rates that are more competitive than Participants. A 2013 report by the Export Import (EXIM) Bank of the US, for example, found roughly US$125 billion in unregulated non-OECD financing (as well as roughly US$63 billion of unregulated OECD ECA financing) that adversely affects US export competitiveness (EXIM Bank of the United States 2013). Participants are working to develop new ways

4 The status of the Arrangement has always been one of "useful ambiguity." Although widely known as the "OECD Arrangement" and developed and monitored at the OECD, the Arrangement is not an OECD Act. See OECD, "The Participants to the Export Credit Arrangement," http://www.oecd.org/tad/xcred/participants.htm:

5 See, for example, "The Export-Import Bank Act codifies some of the Arrangement, either by borrowing direct language or by referencing part of the Arrangement" (Levit 2004: 123). Regulation (EU) No 1233/2011 of the European Parliament and of the Council of 16 Nov 2011 on the application of certain guidelines in the field of officially supported export credits and repealing Council Decisions 2001/76/EC and 2001/77/EC, Art. 1, says, "The guidelines contained in the Arrangement on Officially Supported Export Credits ('the Arrangement') shall apply in the Union."

to entice non-Participants to abide by the Arrangement's constraints. In 2012, the US and China launched a new International Working Group on Export Credits outside of the OECD, but it apparently has made little progress. The consensus decision-making for adaptation and ongoing development of the Arrangement have so far benefitted from the relatively small size of the Participants' group.. Were it to expand significantly, the adaptation and development of the Arrangement could be more difficult.

The Arrangement demonstrates that formally non-binding rules developed outside the WTO can effectively discipline subsidies when a relatively small group of trading partners is affected and the scope of the agreement is circumscribed. The Arrangement uses precise and comprehensive language that helps ensure that common understanding informs practice. Automatic adjustment mechanisms enable adaptation to changing economic conditions. Information exchange and notification procedures build professional trust. By allowing some leeway on substantive compliance while insisting on transparent procedures and notification mechanisms, these instruments provide state actors with more autonomy, while preserving transparency and reducing informational asymmetry. This transparency encourages actors to conform to the discipline. The development and continual evolution of the Arrangement shows that, at least in small groups, consensus decision-making is possible to facilitate updating and compliance with normative commitments. Where the barriers to entry are low for observers and new members, such mechanisms can ensure inclusiveness so that understandings do not unravel.

OECD SHIPBUILDING INITIATIVES

The OECD is the primary forum for discussion of the trade issues related to steel and shipbuilding (Pagani 2008: 26). The OECD Steel Committee and the Working Party on Shipbuilding allow major producers in these sectors to exchange information and examine conditions and trends in the market. The demand for ships and steel is cyclical, with increased pressure for government intervention in these politically powerful sectors during periods of low demand. The OECD's technical expertise and experience, combined with a membership that includes many of the major players in these sectors, made it a natural forum for the development of new subsidy disciplines for steel and shipbuilding. We focus on the shipbuilding initiatives.

Worldwide shipbuilding capacity has long exceeded demand due to the prevalence of shipbuilding subsidies. Post-war Japan (and later South Korea and China) provided support to domestic shipyards as a tool to promote economic growth and development. As European shipbuilders lost market share to Japanese shipyards in the 1950s, they sought subsidies rather than close mismanaged and outdated shipyards. Increased state aid in the form of easy-credit terms, new construction subsidies, and buyer incentives caused significant overcapacity in the shipbuilding sector, severely depressing the price of ships. In response to these trends, OECD members created the Council Working Party on Shipbuilding (WP6) in 1966. Its mandate was "the identification and progressive elimination of subsidies and other measures that distort the [shipbuilding] market."[6] Spurred by the drop in demand caused by the 1970s financial crisis, WP6 members developed policies to stabilize the shipbuilding industry (OECD 1981, 1983a, 1983b). The "General Arrangement for the Progressive Removal of Obstacles to Normal Competitive Conditions in the Shipbuilding Industry" (OECD 1983a) encouraged members to gradually reduce domestic subsidies and contained provisions for the notification of support measures. The General Guidelines for Government Policies in the Shipbuilding Industry (OECD 1983b) pushed for the adoption of government policies that reduced shipbuilding capacity and increased transparency. Although these guidelines were non-binding, domestic shipbuilding policies referred to them (OECD 2005: 246). Japan, for example, referred to the 1976 guidelines when it adopted new policies that reduced capacity by more than 30 percent (OECD 2005: 249). Between 1973 and the mid-1980s, shipbuilding capacity was reduced by 50 percent in the OECD area (OECD 2005: 51). Despite this reduction, overcapacity and subsidization remained a problem, partially due to new producers entering the market, prompting calls for a binding agreement on shipbuilding subsidies.

In 1989, the US initiated negotiations for an agreement on shipbuilding subsidies at the urging of the Shipbuilders Council of America. The agreement was completed in 1994. The signatories included the European Communities, Finland, Japan, South Korea, Norway, Sweden and the US, together representing 80 percent of the world's shipbuilding capacity. The US Senate failed to ratify the treaty due to opposition from large domestic shipbuilding interests who objected to certain terms, which, they believed, favored other parties.

An EU complaint in the WTO about Korean shipbuilding subsidies provoked a second series of talks at the OECD from 2002 to 2005 aimed at resurrecting the shipbuilding agreement and to "bring about normal competitive conditions" (Pagani 2008: 20). The OECD convened a Special Negotiating Group, which included non-OECD members, constituting 96 percent of the world shipbuilding industry (Pagani 2008: 360). The negotiations resulted in a draft text that would have mirrored the ASCM, including a dispute resolution mechanism, a list of prohibited and non-actionable subsidies, and separate disciplines for developing countries. The talks were suspended in 2005, and ultimately terminated in 2010, due to inability to reach a consensus on pricing rules.

6 The OECD Council Working Party on Shipbuilding, http://www.oecd.org/industry/ind/shipbuilding.htm.

Despite the failure to reach an agreement, the WP6 continues to update the shipbuilding support database, providing a yearly inventory of OECD and non-OECD support measures, and conducts peer reviews of national shipbuilding industries. It also conducts workshops for the exchange of ideas and best practices in the shipbuilding industry. WP6 members also developed the sector understanding on export credits in shipbuilding discussed above. This working party is the primary international forum for non-state actors like the International Chamber of Shipping to engage with government representatives on shipbuilding subsidies, although it largely passes under the radar of NGOs. These processes of information exchange and peer review shape normative understandings of shipbuilding subsidies that create a form of discipline that is underappreciated because it does not involve formally binding law. But this informal law that emerges through social interaction in WP6 does have behavioral effects, reflected, for example, in shipbuilding policies in the EU and Japan in the late 1970s.

FISHERIES SUBSIDIES

Fishing provides both jobs and food security, which makes fisheries subsidies politically and economically popular in many countries. Yet subsidies that promote capacity building accelerate the process of fishery depletion, a major global problem. A 2011 Food and Agriculture Organization (FAO) study of global fisheries estimated that 57.4 percent of fish stocks were fully exploited, and 29.9 percent of those stocks were overexploited (13). Many commercially important species are becoming endangered and are vulnerable to collapse.

Recent studies estimate that the fisheries sector receives more than US$35 billion in subsidies each year, with US$20 billion for capacity building, which exacerbates the challenge of responsibly managing fisheries, especially those on the high seas, which are open-access resources, complicating the ability to regulate them. Developed countries grant around two-thirds of fisheries subsidies (Sumaila et al. 2010: 213). These numbers are only estimates, however, because notifications of subsidies to the WTO are limited (and they are underreported in other organizations) in part because of conceptual ambiguity about the classification of such subsidies under WTO rules. Between 2000 and 2003, the US reported more than US$1 billion in Government Financial Transfers (GFT) to fisheries to the OECD, but notified only US$79 million to the WTO under its narrower definition of a subsidy (WTO 2006: 164–65). The WTO (2006) concluded that "a common feature of all official data available on fisheries subsidies (looking at OECD, APEC and WTO data) is that they provide a very limited coverage of fisheries subsidies granted by countries other than the EU(15), United States, Canada, Norway, Iceland, Australia and New Zealand" (WTO 2006: 165). The weakness of ASCM notification and surveillance reduces the usefulness of data available to the WTO, undermining attempts to discipline the sector (Young 2011: 91–92).

For a generation, states have been looking for better disciplines on fisheries subsidies on two tracks, one through United Nations (UN) organizations and the other through the WTO, with both being spurred by NGOs. On one track, the UN, through the United Nations Convention on the Law of the Sea (UNCLOS) and UN Fish Stock agreements, created a legal regime for sustainable fishery practices and established regional fishery management organizations with conservation mandates (Sumaila et al. 2014: 12). In the subsidies discussions, the UN has focused on providing technical support that can lead to substantive reform of fisheries subsidy disciplines within the ASCM, rather than attempting to include a subsidies discipline within its fishery agreements (Skjærsethet al. 2006: 113). In parallel, the UN's FAO has played a leading role in the fisheries subsidies issue. FAO reports helped launch the dialogue on fisheries subsidies in 1992, and FAO documents for an International Plan of Action (IPOA) pressured governments to eliminate subsidies contributing to unsustainable fishing and illegal, unreported and unregulated (IUU) fishing. (FAO 1999, 2001) The FAO's "Code of Conduct for Responsible Fisheries" (FAO 1995) created a comprehensive, but non-binding, regime for sustainable fisheries management practices. The FAO has also developed a guide for identifying, assessing, and reporting fisheries subsidies, and its statistics aid in the monitoring and analysis of fishery practices (Chen 2010: 8–9; Pitcheret al. 2009).[7] In addition, the United Nations Environment Programme (UNEP) has worked to help negotiators understand the technical issues underlying fisheries discussions, providing informal consultations between negotiators and experts, and organizing events to build capacity on the issue of subsidies reform. The UNEP has worked with NGOs, such as the World Wide Fund for Nature (WWF), International Centre for Trade and Sustainable Development (ICTSD), and Oceana in organizing symposia, workshops, and expert group meetings to study the effect of fisheries subsidies and to develop best practices for sustainable fishery governance (UNEP 2008: 15). Although these UN organizations secured commitments to responsible fisheries management and increased the availability of scientific knowledge and data on the size and effect of fisheries subsidies, the effectiveness of these efforts has been limited by the fragmented, voluntary nature of these agreements, the lack of effective peer review, and the lack of enforcement mechanisms to secure compliance.

These challenges facing UN organizations help explain why a second track arose to discipline fisheries subsidies by creating new rules within the WTO. In the 1986 Punta del Este declaration launching the Uruguay Round, fish was not part of either the agriculture or trade in goods sections, but it was mentioned in connection with the negotiations on natural resource-based products, where the aim was simply to enhance market access. The ASCM applies to fish subsidies, but only to the extent that it covers any subsidy, so that it

7 Pitcher et al. (2009) used the FAO code of conduct as a basis for evaluating how successful maritime countries were in managing fishery resources. The study found "dismayingly poor compliance."

contains no specific rules relating to fisheries subsidies. At the WTO Seattle ministerial meeting in 1999, the fisheries trade issue was specifically characterized for the first time as involving subsidies that contribute to overcapacity and overfishing. Many members, however, expressed concerns relating to intrusions on domestic policy space, the need for development exceptions, and the possibility of defining a category of acceptable fisheries subsidies. The 2001 Doha Development Agenda, the mandate for the Doha Round negotiations, expressly linked subsidies and environmental concerns, but the topic was assigned to the rules negotiations together with other ASCM issues.

The Doha Round negotiations on fisheries subsidies have moved even more slowly than other aspects of the round. Negotiators have advanced differing conceptual premises that may simply mask their view of national interests in light of the structure of their fisheries industry and the nature of any state support provided. The principal antagonists in the fisheries negotiations can be placed into three camps, depending on whether their concerns are development, overcapacity, or the domestic industry. The first group is the "Friends of Fish," represented by the US and New Zealand, who want aggressive disciplines on fisheries subsidies.[8] A second group, led by Korea, Japan, and Taiwan, strenuously resist their efforts, and, in particular, oppose a blanket ban on fisheries subsidies. Canada and the EU sometimes fall in either camp. A third group, represented by India and Brazil, consists of developing countries that emphasize the social and economic importance of fishing for sustenance and livelihood, as opposed to commercial goals in developed countries, and insist that any new disciplines must not constrain development strategies.

Three sets of factors appear to shape WTO Members' positions—the balance of artisanal versus commercial vessels in a country's fleet; the ratio of fisheries subsidies to fisheries output in the country; and the nature of the subsidies in question. The strongest proponents of new disciplines (the US and New Zealand) have the lowest ratios of fisheries subsidies to output. Japan, like Korea, has less people employed in fisheries relative to other countries, and the bulk of the capacity is commercial rather than artisanal. In India, the fisheries industry employs over 14 million people and has 208,000 artisanal vessels, compared to only 1,350 commercial vessels. Brazil also has many more artisanal than commercial vessels (Wolfe 2010).

Sumaila and his colleagues (2007) classify subsidies into three categories—good, bad, and ugly (analogous to the categorization of agriculture subsidies in the WTO) (Sumaila et al. 2007). They categorize subsidies that tend to increase fishing efforts as "bad," and subsidies that help to maintain or enhance the growth of fish stocks as "good." Examples of "good" subsidies include support for fisheries management, monitoring, and enforcement. Examples of "bad" subsidies include vessel construction and fuel subsidies, which reduce costs and thus contribute to overcapacity. They categorize subsidies as "ugly" when they are ambiguous, such that their effect on fishing activity depends on the context. Interestingly, while the members of the two resistant camps have strikingly different absolute levels of subsidies, with developed countries responsible for a greater volume of subsidies, a large percentage of both camps' subsidies are either "bad" or ambiguous, and they have low shares of "good" subsidies. Close to half of Canada's subsidies are "bad," which might explain why it is only sometimes aligned with the Friends of Fish group.

Reaching consensus on the notion that fisheries subsidies represented a suitable subject for WTO negotiations took years of effort by international organizations, governments, and NGOs (Casier et al. 2014: 5). First was the patient work of the FAO, UNEP, regional fishery commissions, and the OECD in gathering information on the state of fish stocks and monitoring the effects of fishery operations. Second was a series of multilateral agreements that began to build a governance regime for fishery management. Third was the building of an unconventional alliance of countries concerned with the impact of fish subsidies on efforts to manage fish stocks sustainably. Fourth was the analytic and campaigning power of civil society groups like the WWF and the ICTSD. These groups demonstrated the need for reform, reframed the issue in WTO language, and created pressure for action.

After years of talk in the Doha Round, and strong encouragement from conservations and biologists notwithstanding, discussions broke down in July 2008. Despite all sorts of opportunities for informal information sharing and learning in workshops outside the WTO organized by international organizations such as the UNEP, and by NGOs such as the WWF and ICSTD, and despite the evident fingerprints of NGOs in a draft fisheries text (Young 2009), the expert consensus on what needs to be done had not been translated into consensual understanding among negotiators. The Chairperson observed that "all participants recognize the global crisis of overcapacity and overfishing," attributing the negotiation impasse to divergence in understanding of the issue and the rules that should apply, with wide conceptual gaps on such basic factors as which subsidies should and should not be prohibited, the special needs of developing countries, and the criteria for general exceptions (WTO 2011).

Why have the negotiations stalled? Support to fishers (GFTs) in OECD countries was approximately 18 percent of the value of the total catch from capture fisheries in 2007, not that far below the highly contentious support to farmers (Producer Subsidy Equivalent), which accounted for 21 percent of farm receipts in 2008. Farm subsidies, the source of endless disputes in the GATT, are covered by the AoA. Such subsidies may be easier to discipline because they demonstrably hurt farmers in other countries. Although fisheries subsidies also have negative economic externalities for fishers in

8 The group consists of Argentina, Australia, Chile, Colombia, Iceland, New Zealand, Norway, Pakistan, Peru, and the US.

other places, they have not been the main complaint in any formal WTO dispute, and only two disputes have had even a tangential connection to the fish trade (Chen 2010: 41; Sumaila et al.2014: 34; Young 2011: 91–92).

This lack of conflict may shed light on why rules negotiators struggled to reach a consensual understanding on the causal connections between fisheries subsidies, the trading system, and the environmental impact of overfishing. Nothing in the ASCM deals with overcapacity or resource management. Negotiators could not build on existing concepts, since the usual motivation for disciplines in the ASCM is the effects of a measure on trade. Even the analogies drawn between "good" fisheries subsidies and the agriculture Green Box were misleading, because the former deals with the effects on overcapacity while the latter deals with trade distortions. Similar problems undermine efforts to discipline fossil fuel subsidies.

FOSSIL FUEL SUBSIDIES

Fossil fuel subsidy disciplines are essential, but also difficult for political reasons because of their popularity in developed and developing countries—consumption subsidies are often viewed as progressive in providing assistance to the poor and middle classes, and production subsidies are claimed to be essential to promote economic growth. Fossil fuel subsidies also are viewed primarily as a public goods issue rather than a trade one that adversely implicates other countries' economic interests. The WTO negotiations on fisheries subsidies were only possible because of the work of NGOs, other international organizations, and some governments in framing the issue and backing that framing with specific data showing their extensiveness. Only then could consensus be built that some sort of discipline was necessary and appropriate. Just as for fisheries subsidies, current efforts by NGOs and other international organizations on fossil fuel subsidies can help set the stage for discussions to create disciplines in the future (Casier et al. 2014). This case study looks at how the G-20, UN, IMF, and other international organizations are handling the issue of fossil fuel subsidies, particularly in their approach to definitions, transparency, and obligations. We look at the WTO, OECD, International Energy Agency (IEA), IMF, G-20, and the UN.

The ability to generate consensus and compromise on international fossil fuel subsidies begins with the quality of the data available through the notification and reporting processes, which depends on the definition of a "subsidy" (Casier et al. 2014). The WTO general subsidy definition is based on formally binding reciprocal obligations. It covers a defined list of financial contributions or price or income support provided by a government, and requires that a benefit be conferred to the recipient. Members are obliged to notify "specific" subsidies. Ambiguity as to whether a measure confers a benefit or is sufficiently specific provides Members with a justification not to notify it. In contrast, other organizations such as the OECD and IMF use economic rather than trade-related definitions that can be tailored to the subsidy at issue, with the result that they are able to gather more data, which both enhances transparency and is useful for analytic purposes.

OECD definitions differ in practice for industrial subsidies, fossil fuel subsidies, environmentally harmful subsidies, and agriculture "support." The OECD inventory measures fossil fuel support (referencing the Producer and Consumer Subsidy Equivalents [PSE-CSE] framework used in Agriculture) in terms of measures that support or favor fossil fuel use or production (OECD 2013). Although the inventory uses a deliberately broad definition, it does not measure support provided through risk transfers, concessional loans, or market price support. The OECD inventory is useful because it provides policy information beyond the amount of the subsidy, such as information about the type of subsidy and the conditions necessary to receive the subsidy. The IEA provides complementary data to supplement the OECD inventory because it measures the difference between the price to consumers and an international reference price (price-gap method), capturing the market price support that the OECD definition does not address. The IEA definition, however, would not capture the support measures that do not directly affect the consumer price of fossil fuels.

The IMF defines energy subsidies broadly to include both production and consumption subsidies. Consumption subsidies are measured using a price-gap approach that includes a corrective tax intended to reflect the negative externalities of fossil fuel production in the "reference" price for fossil fuels. A recent IMF report gave an overview of subsidy reform initiatives in 22 countries and revealed the scope of consumer fuel subsidization by analyzing such subsidies in 176 countries. It also provided policy recommendations on how to successfully achieve subsidy reform and avoid common pitfalls in reform efforts (IMF 2013). IMF data, such as its estimates of energy subsidies, can help assess and support commitments to subsidy reform, such as the fossil fuel subsidies phase-outs agreed in the G-20 (Lang et al. 2010: 48).

The weakest definition of fossil fuel subsidies is in the ambiguous G-20 commitment to reduce "inefficient" fossil fuel subsidies that encourage "wasteful" consumption (G-20 2009). Given such an ambiguous definition, countries have much greater justification in not notifying fossil fuel subsidies, thus reducing transparency and trust that others are reciprocally notifying their subsidies and meeting their commitments. The relationship between the definition used and subsequent transparency is readily apparent when comparing notifications of fossil fuel support measures between these organizations. Between 2008 and 2013, there were 640 notifications for fossil fuels reported in the OECD inventory, compared to 64 WTO SCM notifications, and only 35 notified in the G-20 (Casier et al. 2014: 23).

Turning to existing organizational efforts to discipline fossil fuel subsidies, we find wide variation in organizational activity. Within the WTO, little attention has been given to the issue. WTO Members asked only 16 questions about fossil fuel subsidies in the SCM Committee between 2008 and 2013 (Casier et al. 2014: Table 1). The G-20 process, in contrast, has focused on understanding and comparing each country's fossil fuel policies and sharing reform experiences. The 2009 G-20 commitment required countries to create implementation plans for the reduction of fossil fuel subsidies. The data is poor, however, because of the ambiguous definition of the subsidies covered, and, as a result, voluntary reporting in the G-20 is inconsistent. Reviewers of the country-specific implementation plans thus might turn to published data from other sources or gathered through an alternative inquiry process to highlight the need for action. In other words, good data is critical to drive discussions of fossil fuel subsidies and the creation of new disciplines.

At the 2012 Los Cabos Summit, G-20 members reported on the implementation of their commitments (G-20 2012). Some countries had made notable progress with their implementation plans, but the G-20 reiterated the need to improve how fossil fuel subsidies are defined, and to standardize reporting (G-20 2012). In 2013, G-20 finance ministers agreed to undertake a "voluntary peer review process for fossil fuel subsidies."(G-20 2013: 6, para. 24). What was meant by "peer review" remained vague, however. A 2014 roundtable by the Friends of Fossil Fuel Subsidy Reform (a group of non-G20 countries supporting reform, which includes Costa Rica, Denmark, Ethiopia, Finland, New Zealand, Norway, Sweden, and Switzerland) noted that the US and China had voluntarily agreed to undergo peer review under the G-20, while Peru and New Zealand did the same under a similar Asia-Pacific Economic Cooperation (APEC) framework (FFSR 2014: 2–4). Suggestions for improving transparency in the sector include standardizing the submission process for subsidy information, requiring justifications for excluding certain subsidies from the G-20 commitment, separating subsidy reporting from reform to build transparency, establishing an oversight board, and setting more definite timelines to ensure G-20 members can meet their commitments.

The UN system has contributed nothing to definitions or data, so far. In the report of the Open Working Group on proposed post-2015 Sustainable Development Goals (SDGs) (A/68/970), goal 12.c calls on members to "rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies." Intensive work is now under way on designing review and follow-up on the SDGs through the High-Level Political Forum on Sustainable Development (Halle and Wolfe 2015) but fossil fuel subsidies are unlikely to receive much attention. Another potential venue is the UN Framework Convention on Climate Change (UNFCCC) since fossil fuel subsidy reform ought to be included as part of any strategy to reduce greenhouse gas (GHG) emissions, but the UNFCCC has not prioritized subsidy reform in its agenda (Benninghoff 2013: 3–4; Lang et al. 2010: 37–40). It could be that many countries will include fossil fuel subsidies reform in their Intended Nationally Determined Contributions (INDC) submitted in preparation for the 2015 Paris Conference of the Parties. We have not conducted an analysis of Section J on transparency of action and support in the UNFCCC draft negotiating text for Paris, but the UNFCCC will have an intensive review process that may well cover fossil fuel subsidies in INDCs (Merrill et al. 2015).

The IMF's studies and analyses can increase pressure for reform by revealing the harmful impact of subsidization. Unlike the other organizations involved to date, the IMF has a coercive tool to reduce fossil fuel subsidies through the financial leverage it can apply, at least against developing countries and countries in transition. The IMF's assistance agreement with Ukraine provides an example. In April 2014, the IMF and Ukraine agreed on a US$17 billion loan, with disbursements dependent on performance (IMF 2014b). Part of the deal called for broad reductions in energy subsidies, which were as high as 8 percent of gross domestic product (GDP). Ukraine's first review was successful because the government increased collections of overdue gas bills and adjusted energy prices to better reflect true import and production costs (IMF 2014a). Similarly, IMF efforts in Pakistan, which included a US$6.6-billion conditional aid package, were described as a "continuous force that is pushing Pakistan toward energy reform," providing the government the "push and urgency" needed to solve an energy crisis caused in part by low power tariffs (Mangi 2014).

Overall, the IMF mechanism of conditioning aid on the implementation of subsidy reform, along with technical support, has had mixed success. An IMF review of energy subsidy reform initiatives indicated that such programs were successful or partially successful in Turkey, the Philippines, Brazil, Mauritania, Yemen, Kenya, Uganda, and Armenia (IMF 2013: 22). But, these programs failed in Poland, Indonesia, Mexico, and Mauritania (the 2008 energy subsidy reduction initiatives in Mexico and Mauritania received IMF support but aid was not conditional on reform). This asymmetry of IMF treatment of large developed and small developing countries, however, affects the legitimacy of IMF actions, which can lead to developing country resistance.

In sum, subsidy disciplines remain the least developed on fossil fuels. They are particularly difficult because of the development and social justice dimensions at stake, given their widespread use in developing countries. Nonetheless, they are now on the global agenda as actors work toward developing social consensus, primarily through formally non-binding initiatives. These initiatives will be much more effective if meaningful reporting, transparency, and peer-review mechanisms can be developed within one or more organizations.

SUBSIDY INITIATIVES OF NGOS AND THEIR ROLES AND LIMITS

NGOs play important informational roles with respect to subsidies. Where information is incomplete or unclear, NGOs can resort to "provocative notification," a process of notifying what information is available or has been dug up. Where this information is incorrect, and in particular where it suggests subsidies larger than they are in reality, this kind of notification provides an incentive for the country in question to provide the correct information, if only to counter the impact of the NGO notification. Global Subsidies Initiative (GSI) reporting of EU biofuel subsidies provoked the Commission to respond by giving more accurate and up-to-date figures than those available to the GSI (Charles et al. 2013). The transparency objective had been achieved.

While no formal process exists (yet) for NGOs to submit notifications to the WTO, and the general economic support measures identified in the context of the trade monitoring exercise are not included in the public database, the Secretariat does use NGO data that are relevant. For example, in the crisis monitoring undertaken by the TPRB, the Secretariat makes use of data published by Global Trade Alert (Wolfe 2012, 2013). Casier et al. (2014) offer a proposal on how more information about fossil fuel subsidies can be brought into the WTO by NGOs as the basis for analysis and further discussion. With more information, Members can learn from each other, while publication in TPR reports may help citizens learn that certain kinds of policies adopted in favour of consumers and producers, such as fossil fuel subsidies, are in fact perverse.

Subsidy initiatives with active NGO involvement can potentially help governments remain accountable, reach compromise, and resist the pressure to subsidize (Pagani 2008: 42). A 2012 report by Oil Change International and Earth Track noted that the self-reporting of subsidies within the G-20 had fallen and the reporting problems mirrored those found in the WTO, acting as a barrier to real reform. The report also noted that third-party reports of subsidy figures from groups such as the IEA, OECD, World Bank, IMF and UN diverged from the lower estimates made by G-20 members (Koplow 2012: 11–14, 17–18).

In the fisheries sector, the advocacy and outreach efforts of environmental NGOs were vital to gaining public and political support for subsidy reform (Grynberg 2003: 503; Sumaila 2013: 33). As part of its fishery work, the WWF drafted suggestions for eliminating harmful fisheries subsidies and regularly comments on country-submitted reform proposals to the WTO (Schorr 2004; WWF 2007, 2011). It also collaborates with other international organizations in research, symposia, and workshops. For example, the WWF and UNEP jointly commissioned research outlining fisheries conditions and management practices that could guide both WTO negotiators and domestic policymakers in designing acceptable and sustainable fisheries subsidies (Schorr and Caddy 2007). Similarly, the ICTSD research on fisheries provides technical resources and policy suggestions for fisheries reform.[9] The activities of environmental NGO Oceana included conducting more than 500 meetings with WTO delegations, commissioning advertising campaigns in Geneva, Ottawa, and Washington, D.C., holding technical briefings to educate politicians, and mobilizing scientists for advocacy work.[10] Because of these types of efforts, NGOs have been described as the "real powerhouses" behind public support for the fisheries subsidies negotiations in developed countries (Grynberg 2003: 503). The research and outreach roles of NGOs can provide talking points and the public support necessary to maintain greater momentum on subsidy reform than would otherwise exist. It was NGOs that demonstrated the need for reform, reframed the fisheries issues in WTO language, and created pressure for action

By using data gathered from the FAO and other organizations (data that tended to show overexploitation of fishery stocks and subsidization primarily by developed countries), NGOs were able to frame the fisheries subsidies issue in the context of the sustainable development of fish stocks and the fishery sector in less-developed countries. This narrative successfully spurred developing countries to get involved with the negotiations (Casier et al. 2014: 5; Skjærseth et al. 2006: 114; Sumaila 2013: 14). Public advocacy, together with NGO research, data, techniques for identifying subsidies, and specific proposals for reform, were instrumental in making progress on subsidies reform. NGO initiatives complemented those of UN organizations, such as the FAO's development of formally non-binding instruments with substantive provisions like the Code of Conduct for Responsible Fisheries and the International Plans of Action.

The mobilization of NGOs over subsidies generally has limits. The unique nature of the fisheries sector and fossil fuels involving vital environmental and sustainability concerns attracted the attention of NGOs and UN-based organizations. These considerations are not applicable to subsidies targeted at most industrialized sectors, such as shipping and steel subsidies. But NGOs have been active in bringing export credits under scrutiny on good governance issues involving the environment and bribery (West 2011). ECA Watch brings together a network of NGOs to oversee

9 ICTSD Fisheries, http://www.ictsd.org/fisheries.

10 Oceana – Our Work, http://oceana.ca/en/our-work/promote-responsible-fishing/fishing-subsidies/what-oceana-does.

ECA transparency and accountability on environmental standards and human rights. Moreover, the OECD Working Party on Shipbuilding (2013) has engaged with the issue of "Encouraging Construction and Operation of 'Green Ships,'" indirectly responding to environmental NGO activism. Although NGO efforts to reduce subsidies adversely affecting public goods, such as fossil fuel and fishing subsidies, have not yet been successful, such broader-based mobilization efforts have raised the prospects for disciplines that otherwise would not even be on the global public agenda.

CONCLUSION: WHAT WORKS?

We began by observing that disciplining government support through formally binding rules is notoriously difficult, and so we asked, Are informal rules an alternative? And if so, what works? The simple answer is, nothing works really well, but that answer applies to formal as well as informal rules. At the WTO with its formally binding rules, the dispute settlement system is not always useful, and the less formal surveillance mechanisms are hampered by patchy data and the reluctance of some Members to challenge each other with questions. Discipline of agriculture subsidies, however, does seem stronger than the horizontal disciplines, a point that motivated our turn to other case studies. Thus, the more complex answer to the question, what works, is a comparative institutional one. Certain organizations and mechanisms will have comparative advantages over others, whether as alternatives or as complements. Our four case studies demonstrate this point.

The OECD-based export credit Arrangement shows how a formally non-binding mechanism can give rise to a transnational legal order that permeates national law and practices. But it now faces the challenge of whether its virtues (limited participation and flexible procedures) can survive the necessary expansion to include large emerging players who are not part of the OECD club. Unlike export credits, the OECD initiatives on shipbuilding subsidies focused on formally binding law backed by dispute settlement, which made reaching agreement more difficult. With its smaller membership and ability to include important, non-OECD shipbuilding countries, WP6 was viewed as representing a "feasible, faster and leaner alternative to WTO negotiations" (Pagani 2008: 42). For this reason, disciplines—whether formal (through a binding agreement) or informal (through formally non-binding undertakings)—should be easier to develop within a smaller, more focused group. This narrow focus on only one sector, as opposed to the WTO's broad scope, nonetheless, had a disadvantage, at least for negotiating formally binding rules backed by formal dispute settlement, since it reduced the possibility for "package deals" that involve more than one industry. As a result, a group of powerful domestic constituencies was able to derail the negotiations.

The linkage of the trade effects of the fisheries subsidies issue to the broader concern of sustainable fishing practices was instrumental in activating a broad array of actors that included NGOs. This decades-long process made the development of disciplines more likely by generating the data and technical skills, and building toward the consensus necessary to place fisheries subsidies on the global trade agenda. The data produced by the monitoring efforts of groups like the OECD made it possible to analyze the effects of different types of subsidies. Yet because fisheries subsidies have been defined predominantly as a public goods issues, rather than a trade issue, agreement within the WTO and elsewhere has been more difficult to achieve, whether involving formally binding rules or formally non-binding mechanisms. In the fossil fuel subsidies case, the possibility of disciplines is similarly limited by the inability to resolve the inherent tensions between seeing them as a problem of general domestic economic policy (hence whether they are "inefficient"), or a global public goods problem (as a contributor to climate change), or as a trade issue (with externalities for trading partners). The confusion about purposes is then reflected in a confusion over definitions, and inadequate surveillance in all bodies.

One approach to the impasse on fisheries subsidies could be to reference the principles and definitions developed by other institutions to define the extent of Member obligations in a WTO agreement (Young 2009), similar to the incorporation by reference of the Arrangement on Export Credits into an Annex of the ASCM. The 2007 draft Chairman's text (WTO 2007) went in this direction by including a provision allowing an exception to subsidies disciplines if fisheries-related information was "notified to the relevant body of the FAO, where it shall be subject to peer review prior to the granting of the subsidy." The FAO transparency exercise would pertain only to things like the quality of the country's fishery management system; review of the subsidy as such would still take place in the SCM Committee. Most delegations resisted this idea, arguing that the WTO should be able to conduct surveillance of its own rules, but some delegations saw it as an efficient way to deal with a technically complex issue (WTO 2011).

One thread running through our case studies is that subsidies defined as public goods problems involve different organizations and dynamics compared to subsidies defined in purely trade terms. As a result, countries have found it more difficult to reach the social consensus necessary for comprehensive disciplines on subsidies that pose public goods challenges either within or outside of the WTO. It has been difficult even to agree on the definition of the subsidies to be notified in these areas, which is the first step for obtaining information to enhance social understanding and facilitate discipline.

The other thread running through our case studies is that disciplines on subsidies begin with information, and that this public good is under-supplied. The OECD arguably has the largest and most up-to-date database on subsidies of all international organizations, although it is predominantly sector specific, and does not use consistent definitions of subsidies across its databases for industrial subsidies, agricultural subsidies, and environmentally harmful subsidies. This shortcoming of the OECD is illustrative of the general problem—data are not neutral. The information available depends on the purposes for which it is collected, and the definitions used, and that depends on what the international organization and its members are trying to do. Some bodies exist to facilitate learning and promote consensual understanding; others aim to support negotiations on rules, and ensure credible commitments, or manage conflict among states; while the purpose of others is to promote domestic policy change. Of course, all of the international organizations mentioned in this paper have all of these objectives, but their emphasis varies. All of these objectives must be part of an effort to discipline subsidies. Given that a simple integrated structure of binding rules is not likely any time soon, the path to better disciplines begins with more transparency.

How can we generate more and better information? There are limits to subsidies notification by governments, not least because trade ministries may not have the information easily at hand, or be sure of what to report, and where. Reverse notification by trading partners helps, but no country has an incentive to provide this under-supplied public good. WTO Members are also sensitive about notifying things on which they are negotiating. During the intense period of Doha Round agriculture negotiations, even the largest Members were late with notification. Mavroidis and Wolfe (2015) suggest that the WTO Secretariat should be more active in collecting information and making it available. The inadequate notifications by WTO Members can be partially mitigated by giving the Secretariat increased scope, and resources, to act as the "common agent" of Members in assembling information that was or ought to have been notified, adding data from all other international organizations and NGOs to create a better picture of the incidence of subsidies in a sector or a market, with an opportunity for the Member concerned to verify the information. Our story in the end is that sunshine helps. With better information, and robust surveillance, governments providing subsidies will need to explain themselves to their peers, and to citizens. And in the process they will generate new consensual understanding about subsidies disciplines, which is where law begins.

REFERENCES

Abbott, K. W. and Snidal, D. 2000. "Hard and Soft Law in International Governance." *International Organization*, 54 (03), pp. 421–56.

Bacchetta, M., Richtering, J. and Santana, R. 2012. "How Much Light do WTO Notifications Shed on NTMs?" In O. Cadot and M. Malouche (Eds.), *Non-Tariff Measures: A Fresh Look at Trade Policy's New Frontier,* Washington, D.C. and London: World Bank and Centre for Economic Policy Research, pp. 19–50.

Benninghoff, V. 2013. "Prioritizing Fossil-Fuel Subsidy Reform in the UNFCCC Process: Recommendations for Short-Term Actions." Geneva: Global Subsidies Initiative, International Institute for Sustainable Development.

Bonucci, N. 2011. "OECD Work on Export Credits: A Legal and Institutional Laboratory." In *Smart Rules for Fair Trade: 50 Years of Export Credits, Paris*: OECD Publishing, pp. 49–53.

Brandeis, L. D. 1914. *Other People's Money and How the Bankers Use It.* New York: F.A. Stokes.

Brunnée, J. and Toope, S. J. 2010. *Legitimacy and Legality in International Law: An Interactional Account.* Cambridge; New York: Cambridge University Press.

Casier, L., Fraser, R., Halle, M. and Wolfe, R. 2014. "Shining a Light on Fossil Fuel Subsidies at the WTO: How NGOs Can Contribute to WTO Notification and Surveillance." *World Trade Review,* 13 (4), pp. 603–32; doi: 10.1017/s1474745614000226.

Chaisse, J. and Matsushita, M. 2013. "Maintaining the WTO's Supremacy in the International Trade Order: A Proposal to Refine and Revise the Role of the Trade Policy Review Mechanism." *Journal of International Economic Law*, 16 (1), pp. 9–36.

Charles, C., Gerasimchuk, I., Bridle, R., Moerenhout, T., Asmelash, E. and Laan, T. 2013. "Biofuels—At What Cost? A Review of Costs and Benefits of EU Biofuel Policies, International Institute for Sustainable Development (IISD).

Chen, C.-J. 2010. "Fisheries Subsidies Under International Law." *Hamburg Studies on Maritime Affairs,* Vol. 20, Springer Science and Business Media.

Collins-Williams, T. and Wolfe, R. 2010. "Transparency as a Trade Policy Tool: The WTO's Cloudy Windows." *World Trade Review,* 9 (4), pp. 551–81.

Drysdale, D. 2014. "Why the OECD Arrangement Works (Even Though it is Only Soft Law)," http://www.globalpolicyjournal.com/blog/19/12/2014/why-oecd-arrangement-works-even-though-it-only-soft-law

Esty, B. 2010. "Export Credit Agencies (ECAs)." Project Finance Portal, http://www.people.hbs.edu/besty/projfinportal/ecas.htm.

Export Import Bank of the United States. 2013. "Report to the US Congress on Export Credit Competition and the Export-Import Bank of the United States."

FAO. 1995. "Code of Conduct for Responsible Fisheries." Rome: FAO.

FAO. 1999. "International Plan of Action for the Management of Fishing Capacity." Rome: FAO.

FAO. 2001. "International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing." Rome: FAO.

FAO. 2011. "Review of the State of World Marine Fishery Resources," FAO Fisheries and Aquaculture Technical Paper No. 569, Rome: FAO, p. 334.

FFSR. 2014. "Friends of Fossil Fuel Subsidy Reform, United States and World Bank Roundtable on Fossil Fuel Subsidy Reform." Event Report, 11 April, Washington, DC.

Fuller, L. L. 1969. *The Morality of Law*. Revised Edition (ed.). New Haven and London: Yale University Press.

G-20. 2009. "Leaders' Statement: The Pittsburgh Summit." 24–25 Sep, Pittsburgh, PA, https://g20.org/wp-content/uploads/2014/12/Pittsburgh_Declaration_0.pdf.

G-20. 2012. "Summary of Progress Reports to G-20 Leaders on the Commitment to Rationalize and Phase Out Inefficient Fossil Fuel Subsidies." Global Subsidies Initiative and International Institute for Sustainable Development.

G-20. 2013. "Final Communique of the Meeting of Finance Ministers and Central Bank Governors." 15-16 Feb, Moscow.

Ghosh, A. (2011). Strengthening WTO Surveillance: Making Transparency Work for Developing Countries: Cambridge University Press.

Grynberg, R. 2003. "WTO Fisheries Subsidies Negotiations: Implications for Fisheries Access Arrangements and Sustainable Management." *Marine Policy*, 27 (6), pp. 499–511.

Halle, M. and Wolfe, R. 2015. "Architecture for Review and Follow-up of the SDGs: Options for the High-Level Political Forum." International Institute for Sustainable Development.

Halliday, T. C. and Shaffer, G. 2015. *Transnational Legal Orders*. Cambridge, UK: Cambridge University Press.

Hoekman, B. 2011. "Proposals for WTO Reform: A Synthesis and Assessment." *Minnesota Journal of International Law*, 20, 324.

Horn, H., Mavroidis, P. C. and Wijkstrom, E. N. 2013. "In the Shadow of the DSU: Addressing Specific Trade Concerns in the WTO SPS and TBT Committees." *Journal of World Trade,* 47 (4), pp. 729–60.

IMF. 2013. *Energy Subsidy Reform: Lessons and Implications.* Washington, DC: IMF, p. 68.

IMF. 2014a. "IMF Country Report No. 14/263, Ukraine: First Review Under the Stand-By Arrangement." Washington, DC: IMF.

IMF. 2014b. "IMF Executive Board Approves 2-Year US$17.01 Billion Stand-By Arrangement for Ukraine, US$3.19 Billion for immediate Disbursement." Press Release, 14/189, https://http://www.imf.org/external/np/sec/pr/2014/pr14189.htm.

Josling, T. 2015. *Farm Policies and World Markets: Monitoring and Disciplining the International Trade Impacts of Agricultural Policies.* World Scientific.

Koplow, D. 2012. *Phasing Out Fossil-Fuel Subsidies in the G20.* Earth Track and Oil Change International.

Lang, K., Wooders, P. and Kulovesi, K. 2010. "Increasing the Momentum of Fossil-Fuel Subsidy Reform: A Roadmap for International Cooperation." Available at SSRN 1640469.

Levit, J. K. 2004. "The Dynamics of International Trade Finance Regulation: The Arrangement On Officially Supported Export Credit." *Harvard International Law Journal,* 45, 65.

Macdonald, R. A. 2005. *Here, There. And Everywhere: Theorizing the Legal Pluralism of Jacques Vanderlinden Mélanges Jacques Vanderlinden.* Bruxelles: Bruylant.

Mangi, F. 2014. "IMF Drives Pakistan to Coal in Bid to End Subsidies." Bloomberg, http://www.bloomberg.com/news/articles/2014-08-07/imf-binds-drive-pakistan-to-coal-in-bid-to-end-subsidies.

Mavroidis, P. C. and Wolfe, R. 2015. "From Sunshine to a Common Agent: The Evolving Understanding of Transparency in the WTO." *Brown Journal of World Affairs.*

Merrill, L., Harris, M., Casier, L. and Bassi, A. M. 2015. "Fossil-Fuel Subsidies and Climate Change: Options for Policy-makers within their Intended Nationally Determined Contributions." For the Global Subsidies Initiative (GSI), International Institute for Sustainable Development (IISD).

Moravcsik, A. M. 1989. "Disciplining Trade Finance: The OECD Export Credit Arrangement." *International Organization*, 43 (01), pp. 173–205; doi: http://dx.doi.org/10.1017/S0020818300004598.

OECD. 1981. "The Understanding on Export Credits for Ships, with revisions 1969–1981." OECD.

OECD. 1983a. "General Arrangement for the Progressive Removal of Obstacles to Normal Competitive Conditions in the Shipbuilding Industry, with revisions 1972–1983." OECD.

OECD. 1983b. "General Guidelines for Government Policies in the Shipbuilding Industry, with revisions 1976–1983." In OECD (Ed.): OECD.

OECD. 2005. *Trade and Structural Adjustment: Embracing Globalisation.* Paris: OECD Publishing.

OECD. 2013. *Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels 2013.* OECD, Paris.

OECD. 2014. "Export Credits Sector Understandings (Ships, Nuclear Power Plants, Civil Aircraft, Renewable Energy, Climate Change Mitigation and Adaptation, and Water Projects, Rail Infrastructure)." http://www.oecd.org/tad/xcred/sector-understanding.htm.

OECD. 2015. "Arrangement on Officially Supported Export Credits." In OECD (Ed.), TAD/PG(2015)1.

Pagani, F. 2008. *OECD Steel and Shipbuilding Subsidy Negotiations: Text and Legal Analysis.* London: Cameron May.

Pauwelyn, J. 2014. "Rule-Based Trade 2.0? The Rise of Informal Rules and International Standards and How they May Outcompete WTO Treaties." *Journal of International Economic Law,* 17 (4), pp. 739–51; doi: 10.1093/jiel/jgu042.

Pitcher, T., Kalikoski, D., Pramod, G. and Short, K. 2009. "Not Honouring the Code." *Nature*, 457 (7230), pp. 658–59.

Rubini, L. 2009. *The Definition of Subsidy and State Aid: WTO and EC Law in Comparative Perspective.* Cambridge University Press.

Rubini, L. 2012. "Ain't Wastin' Time No More: Subsidies for Renewable Energy, the SCM Agreement, Policy Space, and Law Reform." *Journal of International Economic Law,* 15 (2), pp. 525–79.

Schorr, D. K. 2004. *Healthy Fisheries, Sustainable Trade: Crafting New Rules on Fishing Subsidies in the World Trade Organization.* WWF.

Schorr, D. K. and Caddy, J. F. 2007. *Sustainability Criteria for Fisheries Subsidies: Options for the WTO and Beyond.* UNEP/Earthprint.

Shaffer, G. C. and Pollack, M. A. 2010. "Hard vs. Soft Law: Alternatives, Complements, and Antagonists in International Governance." *Minnesota Law Review,* 94, pp. 706–99.

Skjærseth, J. B., Stokke, O. S. and Wettestad, J. 2006. "Soft Law, hard Law, and Effective Implementation of International Environmental Norms." *Global Environmental Politics*, 6 (3), pp. 104–20.

Sumaila, U. R.. Bellman., C. and Tipping, Alice. 2014. "Fishing for the Future: Trends and Issues in Global Fisheries Trade." Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, E15Initiative.

Sumaila, U. R., Khan, A., Watson, R., Munro, G., Zeller, D., Baron, N. and Pauly, D. 2007. "The World Trade Organization and Global Fisheries Sustainability." *Fisheries Research,* 88 (1), pp. 1–4.

Sumaila, U. R., L. V., Le Manach F., Swartz, W. and Pauly, D. 2013. *Global Fishery Subsidies.* European Union: European Parliament.

Sumaila, U. R., Khan, A. S., Dyck, A. J., Watson, R., Munro, G., Tydemers, P. and Pauly, D. 2010. "A Bottom-up Re-estimation of Global Fisheries Subsidies." *Journal of Bioeconomics,* 12 (3), pp. 201–25.

UNEP. 2008. *Fisheries Subsidies: A Critical Issue for Trade and Sustainable Development at the WTO*. Geneva: UNEP.

West, J. 2011. "Export Credits and the OECD Smart Rules for Fair Trade." In *50 years of Export Credits,* Paris: OECD Publishing, pp. 20–33.

Wolfe, R. 2005. "See You in Geneva? Legal (Mis) Representations of the Trading System." European *Journal of International Relations*, 11 (3), pp. 339–65.

Wolfe, R. 2010. "Endogenous Learning and Consensual Understanding in Multilateral Negotiations: Arguing and Bargaining in the WTO." Canadian Agricultural Trade Policy and Competitiveness Research Network Working Paper (2010-02).

Wolfe, R. 2012. "Protectionism and Multilateral Accountability During the Great Recession: Drawing Inferences from Dogs Not Barking." *Journal of World Trade,* 46 (4), pp. 777–813.

Wolfe, R. 2013. *Letting the Sun Shine In At the WTO: How Transparency Brings the Trading System to Life.* Geneva: World Trade Organization.

Wolfe, R. 2015. "An Anatomy of Accountability at the WTO." *Global Policy,* 6 (1), pp. 13–23; doi: 10.1111/1758-5899.12160.

WTO. 1995. "Ministerial Decision on Notification Procedures, adopted by the General Council." World Trade Organization.

WTO. 2006. *World Trade Report: Exploring the Links between Subsidies, Trade and the WTO Geneva: WTO.*

WTO. 2007. "Draft Consolidated Chair Texts of the AD and SCM Agreements." World Trade Organization, Negotiating Group on Rules.

WTO. 2011. "Communication from the Chairman." World Trade Organization, Negotiating Group on Rules.

WTO. 2012a. "Trade Policy Review: Report by the Secretariat - CHINA WT/TPR/S/264/Rev.1." Geneva: World Trade Organization, Working Party on GATS Rules.

WTO. 2012b. *World Trade Report 2012: Trade and Public Policies: A Closer Look at Non-tariff Measures in the 21st Century*. Geneva: World Trade Organization.

WTO. 2013a. "Minutes of the Regular Meeting held on 22 April 2013." G/SCM/M/85, Geneva: World Trade Organization, Committee on Subsidies and Countervailing Measures.

WTO. 2013b. "Notification Requirements Under the Agreement on Subsidies and Countervailing Measures G/SCM/W/546/Rev.4." Geneva: World Trade Organization, Committee on Subsidies and Countervailing Measures.

WTO. 2013c. "Subsidies for Services Sectors Information Contained in WTO Trade Policy Reviews S/WPGR/W/25/Add.6." Geneva: World Trade Organization.

WTO. 2014a. "Overview of Developments in the International Trading Environment." Annual Report by the Director-General: World Trade Organization.

WTO. 2014b. "Trade Policy Review Malaysia: Report by the Secretariat." Trade Policy Review Body, World Trade Organization.

WWF. 2007. "WWF Comments on New US Proposal on Fisheries Subsidies." Geneva: WWF.

WWF. 2011. "Which Way Forward? WWF Reaction to Recent Proposals." Press Release,. http://wwf.panda.org/?199290/WhichWayForward.

Young, M. A. 2009. "Fragmentation or Interaction: The WTO, Fisheries Subsidies, and International Law." *World Trade Review*, 8 (04), pp. 477–515; doi:10.1017/S1474745609990140.

Young, M. A. 2011. Trading Fish, Saving Fish: The Interaction between Regimes in International Law. Cambridge, UK: Cambridge University Press.

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