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Abstract

Geo-economic tensions and global collective action problems call for international cooperation to revise and develop rules to guide both the use of domestic subsidies and responses by governments to cross-border competition spillover effects. Current WTO rules that divide all subsidies into either prohibited or actionable categories are no longer fit for purpose. Piecemeal efforts in preferential trade agreements and bi- or trilateral configurations offer a basis on which to build, but are too narrow in scope and focus. Addressing the spillover effects of subsidies could start with launching a work program at the 12th Ministerial Conference of the WTO to mobilize an epistemic community concerned with subsidy policies, tasked with building a more solid evidence base on the magnitude, purpose and effects of subsidy policies.

Keywords

Subsidy policies; spillovers; international cooperation; trade agreements; WTO

JEL codes: E61; F02; F15; F42; F68

Introduction[*]

Trade policy has once again become a prominent source of international tension and uncertainty. In this paper we focus on one of the central sources of trade tensions: national subsidy policies. This is not simply a 'China issue'. Subsidies and domestic regulation more generally have risen in significance for the core members of the liberal trading system. Subsidies constitute the great majority of trade interventions imposed since 2009 (Evenett, 2019; Hoekman and Nelson, 2020).

Unlike tariffs, subsidy policies are the natural, and appropriate, instruments for the pursuit of a wide variety of policy goals, but like any policy of economic significance, they will generally have spillovers via effects on trade.[1] Of course, governments may also adopt subsidy policy with the explicit intention of affecting trade flows. In either case, subsidy policies create tension between the gains from openness and losses of sovereignty in particularly stark and difficult ways. The problem is rendered more difficult because unlike tariffs, which relate to both the economic and political system in broadly similar ways, subsidies are embedded in both systems in nationally distinctive ways. Any rethinking of the international subsidy regime must rest on a clear understanding of the economics and politics of subsidies and the nature of cross-border spillovers created by national policies.

We begin in Section 1 with a description of a simple, but robust framework for thinking about subsidies. Section 2 discusses spillovers and their measurement. Section 3 argues that because subsidies are embedded in nationally distinctive economics and politics, rule-making efforts need to take a 'varieties of capitalism' perspective.[2] In Section 4 we briefly characterize extant examples of multijurisdictional cooperation on subsidies. Section 5 distils some principles for an international subsidy regime suggested by existing regimes and the theory of economic policy. Section 6 discusses options for moving forward incrementally on rulemaking. Section 7 concludes.

1. Subsidies in the Theory of Economic Policy

A significant policy will have (generally sizable) spillovers affecting sectors and agents not directly the object of that policy. In fact, the presence of such spillovers is as good a definition of policy significance as any other. Whether one is interested in tracing the effects of policy (positive analysis) or identifying optimal policy (normative analysis), a framework is needed that recognizes market interdependence. Economists have developed just such a framework in the *theory of economic policy*. The theory of economic policy builds on the traditional general equilibrium theory of welfare economics to produce a simple, but robust, framework for organizing analysis of economic policy.

The foundation of the theory of economic policy is the set of marginal conditions that characterize equilibrium in the perfectly competitive economy.[3] Contrary to the common representation of economist

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[1] In this paper we use the term subsidies to include transfers via tax expenditures, i.e., our focus is on measures that (dis-)incentivize certain types of economic activity. See OECD (2011).

[2] See e.g., Hall and Soskice (2001).

[3] In the textbook general equilibrium 2 good × 2 factor × 2 household-type economy, these conditions involve equality of marginal rates of technical substitution across all producing firms, marginal rates of substitution across all households, and the "top level condition" that the marginal rate of substitution between consumption goods (*MRS*) is equal to the marginal rate of transformation (*MRT*) between the 2 goods in production and that these are equal to the relative price, i.e., $MRS = MRT = p$. For a large, open economy we must substitute the marginal rate of transformation through trade (*FRT*), which will not generally be equal to the price.

policy advice, the theory of economic policy neither assumes that the existing economy is perfectly competitive, nor that policy *should* seek the perfectly competitive state. A key distinction in the theory of economic policy is between policy goals that seek to establish efficiency in the face of a deviation from the perfectly competitive norm (an *economic objective*) and objectives that, even in the context of perfect competition, require a policy that causes a deviation from the perfectly competitive norm (a *noneconomic objective*). It is often the case that a first-cut at the analysis of a given policy problem involves assuming the existence of a single objective in the context of an otherwise undistorted environment, but the general framework is easily extended to incorporate multiple objectives as well as many goods, many factors, many types of households and many countries.[4]

Analysis requires a specific objective function: "optimal policy" implies that there is an objective function to optimize. Efficiency *could* be a goal of economic policy, and will be if the objective is an economic one. Whatever the goal, the theory of economic policy embodies a preference for (constrained) efficiency in policy intervention: doing so at the lowest cost in terms of the objective function. The theory of economic policy, as a basic framework, comes down to providing answers to three sets of questions:

- What is the problem/goal?
- How can we evaluate (i.e. rank) possible instruments in terms of objectives and costs?
- What is the best option among these candidates, taking into account constraints on policy choice specific to the case at hand?

With respect to the first question, the clearer we are about the problem, the clearer we will be about responses. Precisely because they involve deviations from the perfectly competitive norm, economic objectives are relatively straightforward. We simply need to identify the relevant distortion(s). These distortions are easily representable in terms of failure of one, or more, of the marginal conditions that characterize equilibrium. The clarity gained from searching for the distortion is one of the key features of the theory of economic policy. Consider the widely deployed infant-industry argument for trade intervention. The notion that local firms cannot compete with more efficient foreign firms now, but with a modest period of protection they will become globally competitive, seems to many policymakers and citizens as nothing more, or less, than common sense. The problem is that the premise that projects in this sector have positive net present value implies the market should be willing to invest in them.[5] The issue is not the presence of foreign competition, but the lack of investors willing to support profitable investments. As this is what capital markets are for, local firms either lack access to a functioning capital market or there is a dynamic externality.[6] In either case, once we have identified the distortion, we can proceed to a consideration of interventions.

Noneconomic objectives are inherently trickier because they imply a goal whose existence is not observable in a first-order way.[7] A government may have a revenue goal, or an income distribution goal,

4 An important practical difficulty is that as the number of objectives increase, the complexity of optimal policy (for virtually any objective function), or the optimal marginal change in policy, increases. This is the central message of the *theory of second best* (Lipsey and Lancaster, 1956). Another practical problem is that as the heterogeneity of preferences increases, even fairly modestly, the ability to solve for an optimal policy decreases, essentially to zero, as shown by the Sonnenschein-Debreu-Mantel theorem (Mas-Colell *et al.*, 1995, section 17.E). Although intuition can be framed by relatively simple, low-dimensional models, the passage to practical policy advice must involve detailed specific knowledge of the actual policy environment.

5 In fact, as Bastable noted in extending Mill's theory of infant industry protection, the evaluation of net present value must take into account not only the private opportunity cost of funds invested in the sector, but also the additional costs associated with the policy (e.g. the costs of protection) (Kemp, 1960).

6 The modifier "dynamic" reflects the fact that this is an argument for "infant" industry protection. That is, whatever the source of the failure to invest, it must disappear in a reasonable period of time.

7 The difference is that in the case of economic objectives the magnitude of the distortion and cost of any degree of remediation of the distortion are rendered relatively more transparent by the fundamental focus on efficiency.

or a national defense goal, but the magnitude of that goal (to say nothing of the goal itself and its relationship to other goals) has no obvious measure. Of course, this does not mean that such objectives are any less central to the program of a given government, or society, than economic goals. Moreover, a given policy can shift from one category (noneconomic v. economic) to the other. Consider the case of anti-trust policy (Eisner, 1991). From the early years of anti-trust policy (i.e. the late 19th century in the US), the political power of the Trusts was a more significant a concern of the US government, and the citizenry at large, than the economic effects of large economic entities. Thus, attempts to regulate the Trusts reflected primarily a non-economic objective. The early economics of antitrust, the so-called structure-conduct-performance (SCP) or "Harvard School" provided an economic analysis focused on size (this was the "structure" part) that was quite consistent in its implications with the central interest in market power. That consistency led to a willingness, though certainly contested, to incorporate economic analysis in the regulatory politics of antitrust. As economists interested in industrial organization shifted away from the SCP framework, toward an analysis emphasizing outcomes independent of structure in the first instance (the so-called "Chicago school"), and as legal training began to incorporate this latter sort of economics, antitrust came increasingly to be seen as primarily about economic efficiency. That change, in turn, affected the view of antitrust enforcement taken by those charged with implementation (both the judiciary and the executive branch).

A consequence of this change, consistent with our earlier comment on the difference in ease of implementation of economic versus noneconomic objectives, was that antitrust increasingly became seen as a technical administrative issue (i.e. it was less freighted with political conflict). In particular, the judiciary and the administrative branch came to see the key issues in antitrust in the same way. Furthermore, while considerable differences remain, competition authorities (both judicial and administrative) across countries began to share a common language and analytical framework for the analysis of potential anti-competitive behavior. We argue below that the analysis of trade policy in general, and subsidy policy in particular, does not share a common language and that the attempt to develop one would be a major advance in supporting cooperation on subsidy policy.

Once the objective is identified, the next step is to evaluate the menu of policies available to pursue it and rank them in terms of cost and benefit. In principle, the list of policies could be taken to include the full range of actions available to a government, but many of those actions have *prima facie* little effect on the objective and some positive cost, or even move the equilibrium with policy further away from the goal. Those actions can be easily rejected. To assess the impact of a policy, we need to consider not only the immediate effect on the objective, but the full general equilibrium effects. Thus, the answer to the second question is a list of policies ranked from the lowest cost per measure of effect on the objective to the highest.

To illustrate the logic, consider the simple, open economy case. Because a tariff is equivalent to a production subsidy and consumption tax at the same rate,[8] if an objective relates to the structure of production or consumption exclusively, a consumption tax-*cum*-subsidy or a production tax-*cum*-subsidy will generally be preferred to a tariff. This is because use of trade policy involves additional costs associated with its effects on the other side of the market. This is the basis of the theoretical preference for subsidies widely noted in the trade law-and-economics literature on subsidies (Sykes, 2005).[9] When thinking about the optimal policy, the level of intervention is as important as the choice of instrument. Setting the level of intervention too low or too high may well reduce the level of satisfaction of the objective function below what would arise without intervention.

8 Lerner symmetry (Lerner, 1936) suggests that import and export taxes are symmetric, but this is sensitive to some core assumptions (Costinot and Werning, 2019).

9 Although there is always an equivalence between a price intervention and a quantity restriction at a particular moment, in a complex environment, especially one characterized by random shocks, a price intervention will generally be preferred to a quantity restriction precisely because the quantity restriction freezes quantity adjustment in a way that a tax-*cum*-subsidy intervention does not.

To summarize: (i) there are a variety of cases for government intervention in the economy, both in support of the efficient functioning of the economy (economic objectives) and to pursue social, political or other goals (noneconomic objectives); and (ii) some form of subsidy will generally be the preferred form of intervention.

2. International Spillovers in the Theory of Economic Policy

The warrant for applying general equilibrium reasoning to the analysis of a specific policy is that the policy is "significant" in the sense of having spillovers to agents and sectors beyond those of immediate interest to the given policy. The same logic suggests that significant policies are likely to have international spillovers as well. As with the domestic evaluation of policy, a characterization of an objective function is needed to evaluate spillovers. Although a given national policy can be evaluated from the point of view of "global welfare" (however defined), in the absence of an entity for whom that is meaningful, we will focus on national decision-makers, i.e., we are interested in the effect on country *B* of a policy adopted by country *A*.

Many agents (individual and collective) will be affected. Thus, we might want to know:

- What is the effect of the country *A* policy on aggregate welfare in country *B*;
- What is the effect of country *A* policy on the distribution of global income between A and *B*; or
- What is the effect of country *A* policy on the distribution of income within country *B.*

Beyond the economic effects, we might want to know:

- What is the effect of country *A* policy on the relative international power/influence of country *B*; or
- How does country A policy affect the domestic political prospects of specific agents in country *B*?

These, and other effects, may all be relevant in some way to the relevant decision-maker in country B. Information on the preferences of that decision-maker is necessary to analyze the appropriate response to a spillover. Except under very restrictive assumptions, optimal response to spillovers will vary greatly with the specification of the policy-maker's objective function. Much analysis proceeds as if the decision-maker is a representative agent maximizing a more-or-less standard utility function.[10] While it is hard to conceive of another baseline from which to begin the analysis of spillovers, it is equally hard to imagine that there is much empirical content in analysis based on these assumptions.

Be that as it may, as an easy example of policy spillover, consider the case of trade policy between two economically large economies—*A* and *B*.[11] Suppose that, for some reason unrelated to trade policy goals, country *B* adopts a tariff.[12] Because country *B* is large, its tariff policy will affect the world price. That change in price will affect country *A* in a number of ways:

- If *B*'s tariff falls on *A*'s importable (as would be the case in a 2-country world), *B*'s terms-of-trade deteriorate, probably resulting in a fall in aggregate welfare (certainly in the case of a standard representative agent);

[10] If we are willing to assume that all country B households are characterized by identical Gorman polar form preferences (e.g. quasi-linear or homothetic) and the policy-maker is a utilitarian, then the policy-maker will act as if she is a representative agent maximizing a well-behaved utility function. This approach is currently so common that many analysts treat these assumptions as a reasonable approximation to a true model of reality. Alternatively, we could assume that the decision-maker is a Samuelsonian social planner that carries out appropriate redistribution in the background and so, again, acts like a representative agent maximizing a well-behaved utility function.

[11] When referring to components of a model economy generically, I will refer to the index sets: factors of production $i \in I$; produced goods $j \in J$; households $h \in H$; and countries $k \in K$. Thus, here *K* is either *A* or *B*.

[12] As we have seen in our discussion of the theory of economic policy, a tariff will often be a second-best instrument for pursuing economic or non-economic objectives. Here, we are not concerned with country *B*'s reason for adopting a tariff.

- Global income falls and, for a sufficiently small country *B* tariff, *B*'s national income rises and *A*'s falls;
- Income distribution in *A* will change (if *A* is a Heckscher-Ohlin-Samuelson economy, with household heterogeneity in factor-ownership) the Stolper-Samuelson theorem tells us exactly what happens to the income distribution;
- If *A* has pre-existing distortions, the change in the world price will interact with those distortions, potentially raising or lowering welfare.

Policymakers in *A* need not know that the price change was caused by a change in tariff policy to observe the price change and its effects. If, for example, they have a conservative social welfare function, a tariff could be a first-best response to a trade price shock.[13] If country *A* adopts a tariff to offset the effect of the terms-of-trade shock (caused by *B*'s tariff), and *A* is large, *A*'s tariff will affect *B*'s terms-of-trade and will, at least partially, undo the effect of *B*'s policy.

If we assume that both national policy makers are aware of the source of the spillover (i.e. the trade policy of the other country), we move into the realm of trade war. That is, once we assume that each country's trade policy, and its effect on the national economy, is observable, it seems unlikely that either will eschew retaliation. There is a long tradition of research on trade wars. This literature builds on the theory of optimal tariffs (a specific application of the theory of economic policy in which international market power creates a first-best, economic argument for tariff policy) by making both/all countries policy active. Under standard assumptions on the economic structures of the national economies, preferences and knowledge of national decision-makers, it is straightforward to solve for the Nash equilibrium in tariffs. Although the assumptions involved are useful in generating simple intuition, they are so wildly counterfactual they make the analysis useless for policy purposes. That said, attempts to compute these Nash equilibrium tariffs for major trading nations generally suggest tariff levels well-above observed tariffs (Bekkers *et al.*, 2020).

The key to both the academic research and the practical successes of trade liberalization from the latter half of the 20th century is the transparency of the tariff as an instrument of policy. Not only is the tariff patently a *trade* policy, but as a price measure it is relatively easy to calculate the economic effects in ways that are comparable across nations. Even in a world with complex production structures and international value chains, tariffs remain relatively transparent.[14] Both the direct price effect and the transparent effect on trade of these have been essential to negotiations on the tariff. When we turn to the analysis of subsidies, neither will be present.

3. Rulemaking to Address Subsidy Policy Spillovers

A large country engaging in a subsidy policy, regardless of its intended link to trade flows, will generally have international spillovers like those deriving from tariffs. Thus, virtually any significant policy action by the government of a large trading economy will affect trade, often but not always unintended.[15]

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[13] Corden (1997) defines the conservative social welfare function as "including the following distribution target: any significant absolute reductions in real incomes of any significant section of the community should be avoided" (p. 74). This helps understand the inclusion of escape clauses in trade law, e.g. Article XIX in the GATT/WTO or Section 201 of the Trade Act of 1974 (as amended) in US trade law. See Deardorff (1987).

[14] The sizable literature on effective rates of protection (protection to value added in an environment with multiple purchased inputs) deals with complex production structure. New research on trade in value added extends these methods to incorporate global value chains (Johnson, 2018). That same research suggests that most of this trade is carried out by very large firms. Thus, not only is the production structure complex, but we would expect these firms to recognize their market power in their (private) decision-making. Unfortunately, solving for an optimal tariff structure in the context of such linkages and market power would seem to require information that is simply not available to governments.

[15] Trade economists are quick to point out that any such policy *could* be intended to affect trade flows/prices, but in a world of very large firms engaged in global production and sales, instead of a world in which final goods are produced in one

The goal of the current international regime for the regulation of subsidies—the WTO Agreement on Subsidies and Countervailing Measures (ASCM)—is to reduce conflict over subsidies that affect trade. In pursuit of this goal, the ASCM defines subsidies as a financial contribution by a government (public) body that confers a benefit to a specific recipient.[16] Importantly, it does not matter what the objective is of a government using a subsidy: there is no notion in the WTO of what constitutes a "good" subsidy. An effort to do so was embodied in the ASCM, which distinguished between prohibited, actionable and permitted/non-actionable subsidies. Loosely speaking prohibited subsidies encompass measures clearly intended to interfere with trade, nonactionable subsidies spanned measures targeting widely agreed goals of national government (regional aid, environmental policy, support for R&D), and everything else was lumped into the actionable category. In principle, these categories reflect the intentions of the policymakers with respect to the goals of policy but the implementation ended up emphasizing modalities of intervention more than the objectives.

The nonactionable category embodied in Art. 8 ASCM expired in 1999, leaving only two categories: prohibited subsidies and everything else. The latter can be the subject of either countervailing duties (CVDs) or WTO dispute settlement actions in cases where a subsidy causes adverse effects on competition in third markets. WTO disciplines seek to constrain the abuse of CVDs by requiring importing countries to demonstrate that foreign subsidies cause or threaten material injury for a sufficiently large share of the domestic industry. In today's world economy where production occurs in GVCs, the high import content of value added embodied in most products implies a need to assess the effects of subsidies on different stages of the value chain.[17]

Nonactionable subsidies are particularly tricky. The essential idea is to recognize governments pursue activities commonly accepted to be legitimate and, thus, it would not only be a violation of sovereignty but a violation of the foundation of democratic legitimacy to restrict them. On the other hand, such subsidies may have competitive effects. Much of the language in the now expired ASCM provision on nonactionable subsidies involves a notion of *de minimis* effect. This is not very helpful as significant policies will not have *de minimis* effects. Regional aid or R&D support are significant in the sense of generating potential competition spillovers (Maskus, 2015). It is perhaps not surprising therefore that the nonactionable subsidies listed in Art. 8 ASCM was not extended beyond the 5-year trial period.

Two types of prohibited subsidies are distinguished in the ASCM: subsidies where conferral is conditional on a minimum level of local content; and subsidies conditioned on export performance. The direct effect of both types of subsidy, like a tariff, clearly affects international competition. The problem with subsidies conditioned on local content is not the subsidy *per se*, but the explicit discrimination against foreign suppliers of intermediate goods.[18] Export subsidies are also clear in their explicit targeting of trade (in this case, presumably, increasing the competitiveness of recipient firms in foreign

place and sold on the international market, tariffs will generally be a rather blunt instrument of trade policy compared to subsidies targeted on specific parts of the value chain (Bloningen, 2016).

16 Every word in this definition provides fertile ground for lawyers, as demonstrated in the WTO case law. For present purposes there is no need not delve into this, although we recognize that some WTO members are dissatisfied with the ASCM because of the way the Appellate Body has interpreted and applied specific provisions. See e.g. Mavroidis (2016, pp. 200-248) and Rubini (2017).

17 Hoekman and Nelson (2020) discuss gaps in the ASCM considering the rise in GVC-based production.

18 This makes it hard to understand Sykes' (2005, pp. 99-100) objection to a distinction between an actionable subsidy and a subsidy conditioned on domestic content in the same sector, since both affect the ability of foreign firms to compete *in that sector.* After all, the framers of the ASCM contemplated a category of permitted subsidies that would also affect relative prices and, in a general equilibrium sense, interfere with trade. The point here is modality, not actual or even intended effects, i.e., the additional requirement that explicitly discriminates against foreign suppliers in the sector supplying intermediate goods.

markets).[19] The real puzzlement about export subsidies, from the general equilibrium perspective taken by trade economists is that governments adopt them at all. Where an appropriately chosen (i.e. optimal) tariff trades off the terms-of-trade gain against the cost of price distortion to the decision-making of firms and households, an export subsidy deteriorates the terms-of-trade and causes distortions. At the same time, at least for some sufficiently small export subsidy, the importing country must gain. Not only is it unclear why a large country would apply such a subsidy, it is equally unclear why the importing country would complain about it.[20] It is perhaps not surprising that pure export subsidies appear to be considerably rarer than the broad class of actionable subsidies.

Because they are essentially price measures that operate at the border, the spillovers from prohibited subsidies can be measured the same way we measure the spillovers from tariffs. That is, we identify the effect on relative prices to the affected country and simply follow through the standard general equilibrium effects of those price changes on the economic and political-economic equilibrium. Unfortunately, prohibited subsidies (or, at least WTO disputes over prohibited subsidies) appear to be far rarer than actionable subsidies. The problem is that, unlike tariffs that are targeted on the price of imports, most subsidies do not emerge from the national trade policy-making process and they affect production structures in ways that are far from transparent.

3.1 Why Tariff Disciplines are "Easy", and Subsidy Disciplines are Hard: Economics

Spillovers from prohibited subsidies are essentially price measures that operate at the border and can be measured – as in the case of tariffs – by their impact on the terms-of-trade.[21] The broader category of actionable subsidies is more complicated as the subsidies are adopted for reasons other than their effect on trade, but may still have significant spillovers. However, even the simplest actionable subsidy is inherently more complex. This will be a subsidy that is in the amber, instead of the red, box precisely because it is intended to respond to some domestic distortion (or some domestically legitimate noneconomic objective), but another country will only take WTO action in the simplest case because this subsidy with a domestic goal also affects the terms-of-trade. But the existence of a terms-of-trade effect means that there is a second distortion (i.e. $p^W \neq FRT$). We know from the theory of second best that this sort of environment yields potentially very complex optimal policies and spillovers.[22] Unless the economies are essentially identical with respect to domestic distortions, similar policies may reflect very different objectives. These complexities still run through standard general equilibrium effects, but such externalities are unlikely to capture the main spillovers from actionable subsidies.

Suppose that *A* and *B* are two large economies that produce and export a differentiated product to one another and to a third market (C) whose production emits carbon as a byproduct of producing the good. Each would like to reduce carbon emissions. Many economists propose a system of emissions permits and creation of a market in permits as an efficient way of pursuing such a goal. If country *A* adopts such a scheme, the additional cost of meeting the emission target will change domestic relative

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[19] Mavroidis (2016, pp. 268-270) makes an argument for export subsidies similar to that of Sykes on domestic content. The response here is the same—the modality directly implies an intention to affect trade.

[20] We refer here to an economic policy rationale. In practice, intervention against export subsidies is likely to reflect political economy forces with negatively affected national firms dominating the interests of national consumers who benefit from the export subsidy. Attempts to account for export subsidies in the case of large countries involve profit shifting (Brander and Spencer, 1985) and/or firm relocation, i.e., where policies induce entry, increase competition, and raise consumer welfare (Venables, 1985). While theoretically interesting, this literature relies on very special market structures and unlikely policy responses.

[21] This is, of course, the basis for the large body of work deriving from the original contributions of Bagwell and Staiger (2002). Even here, however, there is disagreement about the extent to which terms-of-trade externalities capture the objectives of participants in the WTO political/legal system (Ethier, 2001).

[22] There is a large literature deriving from Meade (1955) and Lipsey and Lancaster (1956) analyzing the properties of optimal policies, and optimal local policy reforms, in multiply distorted environments (e.g. Hatta, 1977 and Dixit, 1987).

prices, but because *A* is large, this will also spill over to world relative prices, with the full range of general equilibrium effects in all national economies linked to *A* by trade. In particular, *A*'s policy will tend to reduce the competitiveness of the *A* industry resulting in a shift of production to *B*, thus reducing the impact of the initial policy. Country *A* decides to adopt a system of carbon tariffs.[23] This seems a reasonable response to policy leakage. However, suppose that there are external economies in this sector. There will generally be a tariff that, even with the environmental policy, by restricting access to *A*, allows the *A* sector to expand, reducing its costs sufficiently to capture a larger share of the market for this sector.[24] An additional source of complexity in this case is that *A* producers are, in aggregate, using a greener technology, and *B* producers may also be induced to use a greener technology, which should raise welfare even in the country that did not adopt the policy. Thus, the presence of domestic policy objectives can render the analysis of the effects of tariff policy difficult to evaluate.

Now consider the use of subsidies. Suppose that there is at least one potential new technology for clean production of electric power. Subsidies to R&D could result in greater effort and earlier success.[25] Subsidies to adoption – widely deployed through the tax system in many countries – could result in learning or other economies increasing competitiveness of new technology. Moreover, the identification and bringing to market of such a technology would be a benefit to all consumers. However, in addition to changing production costs, and thus relative prices, across users of energy, this sort of frontier technology might be expected to be the basis for future exports. The general environmental effect should produce no conflict (that is, agreement on the general goal of reducing emissions should make subsidies non-problematic). In fact, the public good nature of such technology might even lead to underinvestment. The gains from winning the R&D race, however, are a purely private good. The logic here is very much like the prisoners' dilemma in the trade war literature. In addition to competitive provision of subsidies, both governments might adopt regulatory structures (e.g. standards of various sorts) that block adoption of foreign technology. As with carbon tariffs, such regulations could be production-supporting export protection.[26]

Much is currently made of the opaque nature of subsidies in the context of state-owned enterprises (SOEs), as opposed to a direct fiscal transfer (OECD, 2016). Conceptually there is no problem but in practice the required information (on cost of capital of the SOE; the fees charged for on-lending or investment; etc.) may not be available.[27] These are intra-firm operations without intermediation of markets. But is this really all that different conceptually from what goes on in the context of production involving complex value chains? These involve complex combinations of internal transfer prices, long-term contracts with negotiated prices, and spot transactions involving very large firms. These involve transactions that are far from purely market-conforming and, thus, will not satisfy the standard marginal conditions that underwrite welfare claims. One real difference is the explicit guarantee from the government/finance ministry, but there are also 'too big to fail' companies in market economies. Accounting standards and regulation of large firms that are systemically important is to some extent political and heavily gamed.

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23 In fact, the EU has considered the adoption of carbon tariffs to support its Environmental Trading Scheme. Not surprisingly, China (and a number of other countries) have argued that such a system is inconsistent with the EU's WTO commitments. The current European Commission President Ursula von der Leyen has made clear that she will seek to implement carbon border taxes as part of stepping up EU efforts to reduce carbon emissions during her term (2019-2024).

24 If the aggregate economies of scale are sufficiently large that there are multiple trade equilibria that can be ranked based on the Pareto criterion, *A*'s tariff has allowed *A* to pick its preferred equilibrium. This is essentially the logic of Krugman's (1984) "import protection as export promotion" argument.

25 R&D subsidies can take many forms. Patents are one particularly common instrument to support R&D.

26 Maskus (2015) notes that the presumption that R&D subsidies do not distort competition is based on assumptions that are increasingly outdated and that R&D support can give rise to significant competitive distortions.

27 The WTO does not require reporting of such information. See Wolfe (2017).

3.2 Why Tariff Disciplines are "Easy", and Subsidy Disciplines are Hard: Politics

As mentioned, differences in economic structure may mean that similar policies *mean* different things in different economies, making negotiation of simple rules difficult. This problem is augmented by differences in the preferences of citizens and political structures that will yield very different objectives across countries seeking to manage policy spillovers even with the best of intentions.

All market-oriented democracies face a fundamental tension between two core goals: efficiency and democratic legitimation. Pursuit of efficiency involves, minimally: enforcement of contracts and property rights; a broad preference for market conforming policy; and appropriate response to what the theory of economic policy calls "distortions"—e.g. environmental policy, antitrust policy, *et cetera* to address market failures. Democratic legitimation involves responsiveness to public demands for policy, even if they might be inefficient (i.e. noneconomic objectives). Among the most important of these across virtually all advanced economies are national defense, income distribution goals, unemployment insurance, education, health care, and environmental policy. In the 1930s, faced with the most significant economic crisis ever faced by democratic capitalism, there was a widely held belief that that this balancing act was impossible (see e.g. Schumpeter, 1942; Polayi, 1944). This fear turned out to be unfounded and while the massive post-War boom was relatively short-lived (*les trentes glorieuses*) the seven decades following the end of the second world war were characterized by unprecedented peace and prosperity for the core members of the liberal international economic order created at the beginning of that period.[28] Along with broadly market conforming microeconomic policy, this was also a period of Keynesian macroeconomic policy and substantial growth in the welfare state—a "compromise of embedded liberalism".

The nation state and the national economy played a central role in the operation of this embedded liberalism. From what Baldwin (2016) called "the first unbundling" (falling international transport costs allowing national firms to export) to the transformation associated with "the second unbundling" (the emergence of global value chains and complex international production), the fundamental structure of economies was national and coextensive with the political systems that legitimated the political economy. Because firms, produced final goods using primarily nationally produced intermediate goods, states could regulate the national economy. Furthermore, because this link was clear, national citizens ("civil society" of a country) could condition support for the state on the performance of the economy. The fundamental role of the state is to manage the linkage between economic performance and political legitimation

Given the central role of international trade and capital mobility in supporting the growth and stability that characterized the post-War era, it is not surprising that there was a conscious effort to construct a set of rules consistent with the sort of political economy that lay at the core of that order (Ruggie, 1982). National trade policy in this era, overwhelmingly tariff policy, was organized as a relationship between national political economies and national sovereignty. This was a core normative foundation of that system.[29] The core members of the liberal international trading system developed a common understanding of tariffs as interfering with the benefits from access to global markets, especially large exporting firms that were prime drivers of the national economies. At the same time, those states retained the right to use protectionist instruments (such as antidumping or safeguard actions) when the national political economic equilibrium was threatened by trade shocks and policy spillovers.

The result of the economic and political success of embedded liberalism at the national level extended to the global political economy through creation of a liberal, relatively tariff-free international trading

[28] In fact, Schumpeter's fear that what he called 'socialism' would replace capitalism materialized, given his broad definition of 'socialism'.

[29] Finlayson and Zacher (1981) remains an excellent overview of the normative structure of the trade regime of the GATT, whose extension to the WTO is direct. The core of that paper is a distinction between sovereignty norms and interdependence norms that is fully consistent with Ruggie's (1982) embedded liberalism.

system, with the WTO as the crowning success. Unfortunately, the Uruguay Round was completed at precisely the moment that fundamental changes were emerging that would push that system to the brink of breakdown. We note three current factors of particular significance.

- First, at least in part as a reflection of the success of the GATT/WTO process, the core nations of the international economy are significantly more open than they were in the earlier years of this system. Tariffs have fallen to very low levels for these nations (on the order of 2% to 3% average tariffs). Having bound tariffs at these low rates in the WTO, governments facing pressure for protection have increasingly substituted to non-tariff measures, often in the form of actionable subsidies. At the same time, the large role of global firms (i.e. firms engaged in global production and sales, involving complex global value chains) has changed the global economy in ways that render traditional tools used to manage interdependence (i.e., tariffs) less effective (Hoekman, 2016).
- Second, the emergence of China as a genuine economic and political power has been a major shock to the system. The fact that the Chinese economy has a strong market orientation without sharing the same market institutions with the US and/or Europe, combined with spectacular growth (and export growth in particular), and that the political system is considerably more opaque than that of most other core political economies of the liberal international order, has raised serious questions about the extent to which it can be a member in good standing of the current liberal trade regime (Wu, 2016). Given the extensive role for SOEs in the Chinese economy, subsidies are an increasing source of conflict (Wolfe, 2017).
- Finally, and at least in part as a function of the first two factors, we have seen the emergence of anti-global populism as a significant political force in many of the core countries of the liberal international system. While this does not have immediate, specific implications for subsidy policy, it constrains what is possible. Not only do these trends make traditional WTO disciplines less relevant, but they make the need for new subsidy disciplines more pressing.[30]

One of the most difficult aspects of the domestic politics of subsidies, from the perspective of designing international rules, is that actionable subsidies emerge from a domestic political process that is not linked to the institutions of international trade regulation in any meaningful way. Specifically, the technocrats, politicians and lobbyists with a primary focus on domestic subsidies do not share common legal, political or economic knowledge with the domestic or international agencies concerned with managing international trade relations. Instead, subsidy policies will be related to, often very politicized, domestic issues (e.g. energy, environment, employment, income distribution, etc.).

An additional source of complexity is that the political and economic structures motivating and constraining subsidy policy vary significantly across countries. As emphasized in the now very large literature on ‘varieties of capitalism’ (VoC),[31] not only may a given subsidy policy be understood very differently across polities, the process generating those policies may also be quite different, so that the stakes and the patterns of conflict may also differ. To this point, we have been presuming that conflicts over subsidy policy reflect primarily conflicts of interest, where “interest” is a well-defined notion that is essentially common across the core nations of the international trading system. The VoC literature suggests that a potentially more intractable problem may be that the domestically anchored understandings of a given subsidy are sufficiently different across countries to inhibit rulemaking defined primarily in terms of modalities of intervention that can be relatively straightforwardly traded-off. That is, unlike tariffs (or, at least, to a significantly greater degree), differing political/economic structures mean that the modalities of intervention will generally differ, rendering agreement on the political-economic interpretation of those subsidies, essential to effective negotiation, very difficult.

[30] Political pressures also translate into demand for domestic regulation of product and factor markets that may have spillover effects as well.

[31] See, e.g., Hancké (2009) or Thelen (2014).

While the label seems problematic, the VoC approach accommodates the case of China. Although China is neither capitalist nor democratic, the Chinese Communist Party and state rely for legitimation on economic performance, and an essential element of the Chinese economic strategy is a strong market orientation (Lardy, 2014).[32] Furthermore, trade has played an essential role in this process (Zheng, 2004, Branstetter and Lardy, 2008). As a result, China has proven itself an active participant in the liberal international trade regime, at least as willing to accept the main rules of that system as the US and the EU.

4. Elements of Extant WTO$^+$ Subsidy Regimes

A liberal trading regime, like a national democracy, needs to balance efficiency and legitimacy. As already observed, because civil societies remain fundamentally national, nation states are the only entities capable of the kind of robust legitimacy necessary for legitimation of international economic relations. The core participants in the creation and maintenance of any such order will remain nation states. As actionable subsidies are deeply rooted in domestic policies, politics and institutions, recognition and protection of sovereignty will remain central to international trade regimes. Moreover, because the "true" objectives of subsidy policy will be unobservable, cross-national differences in institutions and politics will limit the scope for strictly applied 'hard' law. The goal should be to construct a system that avoids the uncertainty and arbitrariness of a purely "diplomatic" approach while not attempting to construct a "judicial" approach that seeks to change the political-economic system of a country. These two goals seem inconsistent, but this is the balancing act supporting democratic capitalism in widely differing nation states, in the EU and other 'deep' integration agreements. In all these cases, the tensions that exist between legitimation and efficiency, especially as enhanced by the need to cooperate across different VoCs, require flexibility and trust.

Three examples of regimes that go beyond the WTO in balancing legitimation/sovereignty and efficiency are relevant for rethinking international rulemaking on subsidies. Consider first the US. We often think of the US, especially in the context of international trade as a single, unified jurisdiction. However, the US is very much a federal system. The *commerce clause* (Article 1, section 8, clause 3 of the US Constitution) states that the US Congress shall have the power to "To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes". In addition, the *dormant commerce clause doctrine*, long established in Supreme Court jurisprudence, asserts that unless Congress explicitly legislates a state right to discriminate, state and local laws that discriminate in interstate commerce, or place an undue burden on that commerce, are unconstitutional.[33] And yet, in the case of business subsidies and cases where the state or local government is a "market participant", discrimination is considered legitimate (Coenen, 1998). As a result, there is significant latitude to engage in "subsidy competition" and there is substantial heterogeneity in the use of subsidies across US states – including to address market failures (e.g., California being much more activist than many other states). This has led to the interesting situation where subsidies provided by the state of Washington that are legal under US law have been the object of WTO disputes.[34]

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[32] There is a sizable literature on the legitimacy of the Chinese regime, much of which stresses the combination of economic performance and nationalism as foundational (Zheng, 2004, Hughes, 2006). The economic component is an example of what Scharpf (1997, pp. 153-155) calls output legitimacy (compared to input legitimacy). The Trump administration seems just as willing to substitute nationalism for democratic process (i.e. input legitimacy) as a foundation for domestic legitimacy as does the Xi administration.

[33] For a recent discussion of the dormant commerce clause, see Chemerinsky (2019, section 5.3). While this principle is well established, in recent years it has come in for increasing criticism. In particular, justices Scalia and Thomas have argued against this as a principle for Supreme Court decision-making (e.g., Sachse, 1999).

[34] E.g., United States: 'Measures Affecting Trade in Large Civil Aircraft — Second Complaint,' WTO, WT/DS353. See Ossa (2017) for an economic assessment of state-level subsidy competition in the US.

An interesting contrast is the EU: a group of 27 countries that have integrated their economies through formation of an economic union (with 19 going further and establishing a monetary union and a common currency). Unlike the US states, the members of the EU are fully sovereign nations. However, from the start, one of the core goals of the European integration project has been to promote intra-EU exchange through creation of an integrated 'single' market and limit state intervention in that exchange. Subsidy regulation in the EU is determined by treaty and overseen and enforced by supranational bodies – the European Commission and the Court of Justice of the European Union. EU member states may not act against perceived violations by another member – instead enforcement is centralized.

EU disciplines on 'state aids' are part of a broader framework of competition policy and pertain to both governments and firms – independent of their ownership structure or control. A key focus of regulation is the functioning of the single market – assuring free trade within the Union. Four criteria apply for state aid to be illegal in the EU: (i) state resources (subsidies, including tax expenditure) lead to (ii) a selective advantage for a firm or activity that (iii) distorts competition and (iv) affects trade between Member States. These criteria also apply to undertakings to which Member States have granted special or exclusive rights, i.e., SOEs.[35] Certain types of support, including regional aid, assistance for SMEs, R&D, broadband infrastructure, energy and the environment are deemed not to distort competition on the EU market but need to be notified (and may be challenged by the European Commission). Agreeing to a set of subsidies unlikely to cause spillover concerns helps focus attention on those subsidies that are more likely to have harmful trade spillover effects. A public services provision (Art. 106 TFEU) specifies that undertakings "entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly" are subject to the general competition rules insofar as their application does not obstruct the performance of their public tasks.[36]

An effects-based approach is used in enforcement cases. A balancing test is applied that asks whether the state aid aims to address a market failure or an objective of common interest, induces changes in the incentive of recipients to change behavior in a way that meets the goal, induces negative distortions of competition or trade, and the balance of effects (Neven and Verouden, 2008). This approach is fully consistent with the theory of economic policy. The aim of the approach was to "shift the argumentation from legal and accounting battles towards a battle over the impact of the aid on markets and ultimately on consumers …[contributing]...towards the effectiveness of European state aid control." (Friederiszick, Roller and Verouden, 2008, p. 626).

A third regime of international subsidy regulation defines common rules for subsidies that are self-enforcing: each government bears the burden of enforcing the commitments made by partner countries and can do so by (re-)imposing measures to offset an illegal foreign subsidy. Such cooperation can take the form of "deep" PTAs such as the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP) or recent PTAs negotiated by the EU with partner countries (e.g., Korea, Japan, Singapore, and Vietnam). Inter-governmental agreements may be sector- or activity specific and not linked to market access liberalization commitments. Examples of the latter are the OECD Export Credit Arrangement and the G20 Global Forum on Steel Excess Capacity (GFSEC), established at the 2016

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[35] Gutiérrez and Philippon (2019) argue that European market regulation has become more pro-market than the US in recent years. Philippon (2019, pp. 134-135) argues state aid rules negotiated among sovereign nations in the EU leads to DG Competition being more independent than national regulators facing domestic political pressure, i.e., the Department of Justice or the Federal Trade Commission. It is also salient to observe that part of Philippon's argument is that "economic analysis became more prevalent, in particular with the creation of the position of Chief Competition Economist in 2003" (Philippon, 2019).

[36] TFEU Art 107(3) lists measures that may be considered to be compatible with the internal market, including (i) aid to promote the economic development of areas where the standard of living is abnormally low or there is serious underemployment….(ii) aid to […] to remedy a serious disturbance in the economy of a Member State; and (c) aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest.

G20 summit.[37] The mandate of this forum, facilitated by the OECD, included producing and sharing reliable statistics on production capacity and measures of excess capacity across major steel producers, and identifying measures to reduce global production. The forum provided a platform for the exchange of data on steel capacity and information on policies, including support measures, thus improving the information base and the transparency of the relevant policies implemented by major steel producing countries. The forum includes both governments and the industry, the latter being a key source of information on production and investment trends. The forum reported to G20 Ministers annually during 2017-2019 and met at least three times a year during this period.[38] Such inter-governmental arrangements seek to constrain the ability of governments to undo market access commitments through regulatory policies (in the case of PTAs) or to limit the scope for a race to the bottom in a policy area by enhancing transparency through exchange of information and dialogue (OECD, G20).

Most extant PTAs have provisions on subsidies (Rubini, 2020). Often these provision mirror those found in the WTO.[39] Only a quarter of all PTAs go beyond the ASCM and include provisions specifying that certain types of subsidies are not considered to be trade-distorting. Most of these are EU PTAs. These subsidies generally pertain to public services, regional aid, or environmental protection. Rather than being actionable the approach taken is to call for consultations if such measures are deemed to have detrimental spillover effects. Conversely, a small share of PTAs also go beyond the ASCM by including more subsidies in the prohibited category, e.g., in specifying that State guarantees and support to insolvent or ailing companies are prohibited (e.g., EU PTAs) and a ban on provision of State support on non-commercial terms to the commercial activities of SOEs (CPTPP).[40] Surprisingly, it is not uncommon that national treatment obligations appear to apply to subsidies, although this is more common in older PTAs than those negotiated recently. Rubini (2020) calculates that the share of PTAs in which national treatment applies (at least notionally) to subsidies fell from some 70 percent in pre-1995 PTAs to about 30 percent in post-2010 PTAs. In parallel, the share of PTAs with CVD provisions increased from one-third in pre-1995 PTAs to almost 90 percent for post-2010 PTAs. Less than half of all PTAs (128/283) have notification requirements for subsidies, while roughly one-fifth have established deliberation mechanisms to address subsidy concerns (these are not distinct categories). Interestingly, a nontrivial share of PTAs (19%) include provisions calling for cooperation between parties to act against export subsidies granted by nonsignatories.

Deep(er) PTAs also have adopted approaches to deal with SOEs. As mentioned, in the EU competition law and state aid disciplines pertain to SOEs as these are regarded as any other undertaking. Moreover, the EU has implemented a competitive neutrality framework that goes further than ensuring that competition law and policies apply to the behavior of SOEs as well as to private firms. This framework, consistent with the OECD Guidelines on Corporate Governance of State-Owned Enterprises, focuses on identifying and removing competitive advantages of SOEs with respect to taxation, financing costs and regulation (Capobianco and Christiansen, 2011). The framework complements the explicit inclusion of subsidies in EU competition policy disciplines. EU PTAs often

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37 See https://trade.ec.europa.eu/doclib/press/index.cfm?id=2077. Bloningen and Wilson (2010) discuss the economics of subsidies and excess capacity.

38 The Forum was established at the end of 2016 for an initial three year period. In October 2019, China and Saudi Arabia decided not to continue participation for another 3-year period. China argued it had done more than its fair share by "slash[ing] total steel production capacity by more than 150 million tonnes since 2016, or 114 per cent of the global steel capacity cut … and … redeploy[ing] 280,000 steel workers, which is more than the combined deployed number of steel workers in the US, the EU and Japan." See https://www.scmp.com/economy/china-economy/article/3034753/global-steel-forum-scrapped-china-says-it-has-done-more-its. Other countries agreed to continue to interact and exchange information on steel-related policies and monitor production capacity during 2020-22, with the forum continuing to be supported by the OECD secretariat and operating as an open platform to support this engagement.

39 What follows draws on Rubini (2020).

40 Both EU PTAs and the CPTPP subsidy disciplines exclude activities of SOEs associated with providing public services in their domestic markets.

replicate the language of Art 106 TFEU mentioned above, specifying that entities charged with public interest tasks are subject to competition rules if this does not preclude them from performing their public service obligations.

Less far-reaching integration agreements often contain specific provisions pertaining to SOEs that require them to operate on a commercial basis and prohibit anti-competitive behavior. The CPTPP imposes nondiscrimination obligations on SOEs, requires them to act on a commercial basis; and prohibits provision of non-commercial assistance (subsidies) that has adverse effects or injures the interests of another party. Subsidies to SOEs, both direct fiscal transfers and indirect subsidies, are actionable and signatories must publish data on both extant SOEs and measures used to assist them (Kawase and Ambashi, 2018). Two thirds of the 283 PTAs assessed by Rubini and Wang (2020) include language requiring SOEs to behave in accordance with commercial considerations. In practice, making this meaningful will involve assessments of whether SOEs have hard budget constraints – i.e., are subsidized and/or provide subsidies in turn. Not surprisingly, some 70 percent of extant PTAs with SOE provisions include subsidy disciplines that apply to SOEs; more surprisingly, only a little over one-third of PTAs that include SOE provisions have notification requirements, and only 10 out of 283 foresee collaboration in generating information on the operations of SOEs (Rubini and Wang, 2020).

In the next subsection, we discuss some institutional elements that support these existing regimes and are portable to a broader international regime for the regulation of subsidies.

5. Good Practices and Economic Policy Principles

A stable, effective subsidy regime will require reliance on relatively simple, robust rules of thumb relating to both the domestic content of subsidies and the nature and magnitude of spillovers. Aside from the existing consensus reflected in the WTO on prohibiting export subsidies,[41] a prohibition also found in many PTAs, rules of thumb can help to recognize the complex ways domestic and international political economies are interrelated. The theory of economic policy is very useful in doing so. Given any underlying economy and government objective function, the optimal (or constrained optimal) policy for dealing with, say, an environmental externality will differ significantly from a policy intended to distort trade. Rules of thumb such as a presumption that price-based measures are more efficient than quantity-based measures (such as domestic content requirements), nondiscrimination and incorporating some broad measure of consumer welfare in evaluation of national gains and spillovers, provide a more robust basis for policy evaluation.[42] Equally important, the theory suggests the importance of taking seriously the presumption that subsidies may be the most appropriate instrument to deal with market failures as they can target either production or consumption. Agreement on "best practice" that links accepted policy goals to instrument choice rooted in the theory of economic policy could identify approaches that create a rebuttable presumption against anti-subsidy responses.

"Rules of thumb" support good faith discourse on domestically relevant subsidies and possible international spillovers in ways that permit technocratic cooperation. This sort of approach forms a substantial part of competition policy analysis, where current thinking emphasizes a goal of ensuring the efficiency of the market and proceeds from a presumption that market outcomes are likely to be relatively efficient. However, that is only a presumption. A variety of factors related to market structure,

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[41] While WTO prohibitions on both export subsidies and domestic content are relatively clear, the US permits states to discriminate on the local content subsidies. In some policy areas such as public procurement discrimination is permitted by the WTO unless members have signed the Government Procurement Agreement.

[42] It is attractive to consider a role for global welfare (leaving aside obvious problems defining what this might mean as a practical matter), especially when the relevant issues are global in nature (e.g. environmental policies). However, if we take seriously that legitimation occurs at the nation state level, it is hard to conceive of how to incorporate such a notion. What can be done is to assess the extent and incidence (distribution) of the impacts on *shared* noneconomic objectives, i.e. areas where goals are common.

barriers to entry and upstream and downstream effects can enter into a rejection of that presumption (e.g., Bolton *et al.*, 1999). Similarly, the WTO has a general goal of liberalization, but recognizes that safeguards are essential to the legitimate functioning of the system. Thus, there is a presumption that, if a national administrative process is consistent with WTO law, that state has a right to impose some sort of protection. While disagreements can and do arise, as illustrated by many WTO disputes related to 'trade defense' actions, those cases relate to essentially technical questions. A functional subsidy regime will recognize the right of nation states to engage in a wide range of domestically warranted subsidy policies, but also that conflicts will emerge over modalities and levels of acceptable competitiveness spillovers. Making such conflicts the subject of technical discourses focused on relatively well-specified questions may deflect much of the political heat associated with conflicts over inherently domestic issues.

The multi-jurisdictional regimes briefly considered above, together with heuristics drawn from the theory of economic policy suggest several elements of a revised subsidy regime.

5.1. Identify shared objectives and mutual gains

For traditional trade liberalization, the essentially mercantilist logic of exchanging "concessions" on market access leads to both sides reaping the gains from less discrimination. Analogously, in the subsidy setting, cooperation must deliver benefits to all participants by reducing discrimination.[43] In the US, this is the point of the commerce clause. Free trade among the states created a continental market that permitted, and permits, rationalization and growth among major trading partners (i.e. the states) with essentially no risk that those markets unexpectedly are blocked. The core rules of the EU are similar, reflected in the four freedoms (free movement of goods, services, labor and capital), although, as noted above, the EU goes further than the US in terms of subsidy disciplines. The WTO does not have free trade as an objective, but pursues reciprocal liberalization of access to product markets as an instrument to achieve common development goals specified in its preamble. Deep PTAs seek to expand on the WTO in terms of fully liberalizing access to product markets and adopting policies to support competitive neutrality.

Determining shared goals for subsidies is more difficult than for tariffs and other border policies because the set of possible underlying policy objectives is larger. That said, while the modalities (instrument choice) may differ, many goals pursued by national governments are similar across jurisdictions, implying there may be positive spillovers as well as negative competitive effects. In the case of green taxes/subsidies, for example, in addition to whatever costs/benefits there may be for national firms from a policy targeting adoption of green technologies, to the extent that the environmental externality is global in nature, that public good needs to be recognized. Specifically, if provision of a private benefit makes the policy more politically sustainable, that is a plus for all participants. With that as a starting point, cooperation on the general goal seems less out of reach. Such cooperation exists in areas like control of epidemic disease as well as less dramatic areas as macroeconomic policy coordination. An agreement to make consumer/citizen welfare an essential part of any discussion of effects is an effective way of introducing these issues.[44]

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[43] While the most used metric of benefits is economic (efficiency, growth), there is also a hard to measure but widely recognized benefit that runs through a functionalist argument that greater commerce underwrites more cosmopolitan attitudes and more peaceful relations in general. This was explicitly a goal of both the framers of the US constitution and the founders of the EU.

[44] As noted previously, while it is attractive to emphasize global welfare, there is no entity responsible for global welfare and no global civil society to claim the benefit. There is, however, a collective benefit to the members of the subsidy regime: insofar as certain noneconomic objectives are common – e.g., reducing greenhouse gas emissions – their pursuit will have global positive spillover benefits.

An implication of this is that attention should focus on agreeing to distinguish between rationales for subsidization. The competitive spillovers associated with efforts to address collective action problems and market failures should be differentiated from those where the underlying objective is industrial policy-driven (competitive). Measures associated with what is agreed to be a legitimate collective action problem may have competitive effects, but in principle these should treated differently from spillovers arising from subsidies that are not motivated by market failures.

This is not new ground for the WTO. Art. XX GATT and Art. XIV GATS provide for exceptions to trade policy commitments made in WTO agreements if necessary to protect public morals; human, animal or plant life or health; or conserve exhaustible natural resources. The so-called green box approach used in the Agreement on Agriculture exempts subsidies deemed to not distort trade, or at most cause minimal distortion. These include direct income support for farmers decoupled from production levels or prices, environmental protection and regional development programs. The Agreement also allows developing countries additional flexibilities in providing domestic support,[45] in part reflecting a presumption that these are less likely to create significant cross-border spillovers.

What was included in the now defunct Art. 8 of the ASCM was too limited and narrow in scope (Cosbey and Mavroidis, 2014). It did not encompass an explicit recognition that some subsidies are much less of a concern that others, and that one of the tasks of governments is to address market failures – including problems global in nature. Disciplines need to consider (be conditioned on) what governments are aiming to do, implying asking what the underlying problem or objective is, and differentiating economic from noneconomic goals. Countries need to know what a government’s goal is to assess if measures are fit for purpose and engage in evaluation of alternative instruments and their practical feasibility.

5.2. Competitive neutrality and nondiscrimination

Nondiscrimination norms are deeply embedded in liberal political economies. In US constitutional law, the privileges and immunities clause (Article IV, section 2, clause 1: “The Citizens of each State shall be entitled to all Privileges and Immunities of Citizens in the several States”) prevents one state from treating the citizens of another state differently than its own citizens. Similarly, Article 18 of the Treaty on the Functioning of the European Union prohibits discrimination based on nationality. In the WTO, the combination of most favored nation and national treatment serve to underwrite similar norms of nondiscrimination in international commerce. However, even in the US, it is widely accepted that state governments will have different goals, presumably reflecting (at least in part) differing preferences of citizens and will pursue common goals with different strategies. The massive literature on federalism stresses both the democratic and efficiency (via experimentation) gains from the coexistence of multiple regulatory/political economic regimes (e.g., Burgess, 2006, Bednar, 2009). For such policy experiments to be sustainable, local taxation must produce local public goods for local citizens and thus may require restricting access to such public goods, and to fiscal resources, to local citizens. This is one of the main justifications for the permissiveness toward locally targeted subsidies in the general context of the dormant commerce clause principle (Coenen, 1998).

Consider again the case of green subsidies. Because these pursue a widely accepted goal, policies (i.e. subsidies) pursuing such a goal should be non-actionable. However, there will be policy spillovers. If policy discriminates in favor of domestic firms, the associated competitive distortion will lead to conflict. A rule of thumb creating a presumption in favor of national treatment can narrow the range of conflict. Indeed, basic economic policy principles suggest nondiscrimination will be more efficient in attaining the noneconomic objective. This is politically challenging. Strong pressure to reserve at least some of the subsidy benefit for local firms is likely – after all, the revenues supporting the subsidy presumably derive from local taxes.

[45] https://www.wto.org/english/tratop_e/agric_e/agboxes_e.htm

It makes sense in this context to treat nondiscrimination as a rebuttable presumption. That is, the provider of a subsidy that targets an agreed “good” goal (e.g., greening the economy) should be allowed to present a case for violation of nondiscrimination in terms of political constraints and economic goals that are understood by all members of the regime. One way of doing so is to put in place collaborative processes to consider such effects and assess if they can be attenuated. What matters here is whether the measure used is efficient (in the sense used in the theory of economic policy). If so, competitive effects are likely to be desirable, needed to change behavior and attain (non)economic objectives that all parties have agreed ex ante are legitimate. Conversely, in the case where a subsidy cannot be justified as dealing with a collective action/market failure problem reciprocity is appropriate – countries should be able to use CVDs or bring disputes alleging adverse effects, as permitted by the ASCM.[46]

5.3. Evidence and evaluation

One input into narrowing the range of potential conflict is to ensure national subsidy regimes are transparent. It is precisely because national political economies are sufficiently different to render clarity of purpose obscure, that clarity on both the modalities of intervention and the processes that produce those interventions are particularly important. A central need here is to both measure *and* analyze the prevalence and effects of subsidies using comprehensively documented methodologies that consider the purported goals of the policy instruments used. Agreeing on comparable measures of subsidy is important to create a basis for ongoing consultation.

The approach taken in the WTO to fostering policy transparency is to rely on notifications by WTO members complemented by periodic peer reviews of national trade policies informed by reports prepared by the secretariat. Many WTO members do not live up to the notification commitments they have made (Wolfe, 2018). Proposals to remedy this deficiency, such as imposing penalties for late or incomplete reporting as has been proposed by the US, EU and other countries is unlikely to do much to improve matters.[47] Creating positive incentives for greater transparency by demonstrating the value of compiling information on domestic policies to governments for the design and evaluation of programs and providing assistance to adopt good national practices is likely to be more effective. The theory of economic policy discussed earlier suggests a cooperative as opposed to adversarial approach is called for, centered on joint engagement, consultation and deliberation informed by agreed measures of policy interventions and analysis of their economic effects and cross-border spillovers.

A necessary condition for this to be feasible is delegation of both measurement and analysis to a trusted, neutral and technically capable body that acts as an agent for the principals (governments; legislatures; private sector stakeholders). The OECD has played this role for decades in producing comparable analyses of subsidy regimes in agriculture (OECD, 2019a), and more recently, fisheries, biofuels and fossil fuel subsidies (OECD, 2017; 2019b) as well as studies of subsidies in specific sectors, e.g., aluminum (OECD, 2019c) and semiconductors (OECD, 2019d).[48] The OECD experience illustrates the importance of conceptualizing transparency as going beyond documenting policies – as done by the WTO TPRM – to measure the magnitude of interventions using well-defined indicators such as the producer support estimate (PSE) in agriculture, and using these as inputs into assessments of the economic incidence and effects of the policies of interest. It also reveals the need to go beyond a

[46] Similar tensions arise in the public procurement context where strict reciprocity is central to the plurilateral Government Procurement Agreement (Hoekman, 2018).

[47] See “Procedures to Enhance Transparency and Strengthen Notification Requirements Under WTO Agreements,” JOB/GC/204/Rev.2 (June 27, 2019). This revised proposal contains several positive elements, including a recognition that developing countries may need assistance to compile information. The EU, Japan and US have proposed that non-notified subsidies that identified by trading partners automatically should be deemed to be prohibited, See https://trade.ec.europa.eu/doclib/docs/2020/january/tradoc_158567.pdf.

[48] One of the great virtues of this work is the explicit incorporation of value chains into the analysis.

mechanical reliance on 'notifications' and working closely with governments to build 'ownership' of the process.

Wolfe (2020a) discusses the factors that allowed the OECD to calculate and report PSEs for agriculture in the 1980s, noting that key factors were demand by Finance ministers seeking to control agricultural support levels and strong leadership by the United States, which wanted to reduce European agricultural protection. Given that subsidies are costly to the budget a similar dynamic might emerge today. More generally, because Trade ministers have no control over subsidies, support for emulating the PSE example will have to come from other parts of government. Wolfe (2020a) notes that neither the OECD Council nor the G20 has revealed interest in measuring and assessing the effects of non-agricultural subsidies, but the fact that such interest was demonstrated for steel (reflected in the creation of Global Forum on Steel Excess Capacity) and the EU-Japan-US trilateral process – both Ministerial-level bodies – suggests that at least for some of the large players industrial subsidies are a major concern and that an analogous dynamic might be orchestrated.

Measures such as the PSE are inputs into international deliberation and not directly useful for negotiating purposes. The PSE did not end up being the focal point for the WTO Agreement on Agriculture for reasons explained by Wolfer (2020a). This arguably is not a problem for inducing cooperation on industrial subsidies as what is needed is not hard law (binding rules) but a law and economics informed approach that focuses on establishing facts (baselines) and developing a common understanding of the welfare effects of subsidies. There is much sound and fury around Chinese industrial subsidies, but very little focus on the many subsidy measures implemented by other G20 countries documented by the Global Trade Alert. The fact is that we do not know enough about the effects of different types of subsidies, their motivation, and their cross-border spillover effects to make a compelling case for specific new rules. Moreover, even if rules could be agreed, it is important to put in place processes that allow an effects-based approach to be used (e.g., the type of balancing test applied in the EU context). Such a competition policy approach also allows the flexibility needed to assess the magnitude of subsidies and their effects in different contexts and market structures. In the current multilateral context such an approach will of course not be able to focus on enforcement, but the methods and conceptual framework can be applied to build a better understanding of the effects of subsidies.

6. Moving Forward Incrementally

No subsidy regime can function without full participation of the United States, the European Union, and the People's Republic of China. On the one hand, this means that any such regime be seen as supporting the generalized gains from trade/global production, and not as an attempt to isolate or "reform" China. On the other hand, this means that China should accept that it has a leading role to play in that regime. Together, these do not mean that China must meekly accept the rules of international trade as currently constituted, or as they are contemplated in the US, the EU or the EU-Japan-US trilateral discussions. Rather, China, the EU and the US – the dominant players in the global trading system – should recognize their political economies are consistent with a broadly liberal international regime but are, and will remain, profoundly different from one another.

Although agreement between the three major players is a necessary condition for moving forward in attenuating trade tensions, other countries are of course also directly concerned by subsidy-related conflicts and any efforts to agree to new rules of the road. Some countries, including Australia, Canada (the leader of the Ottawa group considering WTO reforms), Japan (a member of the trilateral group focusing on industrial subsidies and related policies) have been actively participating in discussions on subsidies in the WTO. The same is true of major emerging economies such as Brazil, India and other developing nations. These countries have put forward proposals in the negotiating group dealing with subsidies while the Doha round was still active. Pro-active engagement and ideally collective action by these countries to launch initiatives for deepening cooperation on subsidies would help ensure that matters of interest to the WTO membership more broadly are addressed.

Any reform of the existing international subsidy regime needs to center on commitments to cooperate in compiling and sharing information and analysis of subsidies with the view to resolving conflicts. In the absence of a Supreme Court or a European Court of Justice for the global trade system, the regime must rely on good faith bargaining by all participants, backstopped by national anti-subsidy law (countervailing duties), i.e., retaliation. We have suggested desirable elements of such a regime in the foregoing. A key ingredient is to agree on establishing the information compilation and 'clearing house' function needed to prepare the ground for agreement on new rules that are mutually beneficial to the participants.

Building an epistemic community

Wolfe (2017) argues that in areas where the parties lack consensual understanding of the issues, and relations of trust are yet to emerge, premature efforts to create binding rules through negotiations or WTO disputes are unlikely to succeed. Successful WTO agreements addressing regulatory policies such as the agreements on sanitary and phytosanitary measures, technical barriers to trade and trade facilitation are all associated with a body of agreed technical knowledge and accumulated good will among the relevant national regulatory agencies. Peter Haas (1992) refers to a group of people linked in this way as an *epistemic community*. Specifically, he defines an epistemic community as a group of professionals with:

- *a shared set of normative and principled beliefs*, which provide a value-based rationale for the social action of community members;
- *shared causal beliefs*, derived from their analysis of practices to address problems in their domain, that serve as the basis for understanding linkages between possible policy actions and desired outcomes;
- *shared notions of validity*—criteria for weighing and validating knowledge in the domain of their expertise; and
- *a set of common practices*—associated with the problems to which their professional competence is directed with a view to enhance welfare.

Haas is interested in epistemic communities precisely for the way in which they ease international cooperation in policy domains characterized by a substantial degree of technical knowledge that can form part of the basis for such cooperation. There are a wide variety of policy domains in which such epistemic communities help support international cooperation, among others: central bank policy and banking regulation (Kapstein, 1992); competition policy (Tarullo, 2000, Maher, 2002; Kovacic and Hollman, 2011); environmental policy (Abbott, 2012); and product safety (Livermore, 2006).[49]

At this point in time, no such community exists around the international regulation of subsidies. This issue straddles domestic and international communities generally and a wide variety of specific policy areas. In addition, as in many areas, there is a significant gap between the ways economists and lawyers, both groups of which are essential, understand issues like subsidies. Neither of these gaps in community are unbridgeable. The case of competition policy is particularly interesting, not only have lawyers and economists found common ways to understand the issues of competition policy that incorporate both legal and economic fundamentals (Eisner, 1991) but there is substantial cooperation at the EU level (Waarden and Drahos, 2002, Wilks, 2005).

An essential question is, then, how to begin to create such an epistemic community. One key output and a potential foundation for cooperation and legitimation would be the creation of commonly agreed forms of information. This information sharing is the sort of cooperative enterprise that might help build

[49] While much of this literature emphasizes state actors, it should be clear that participants in such communities include private standard setting organizations (Yates and Murphy, 2019), NGOs (Willetts, 2011); and various combinations of state and non-state actors (Abbott and Snidal, 2009).

a perception of common purpose. As noted in Hoekman and Nelson (2020), many government agencies and international organizations are involved in the design and implementation of subsidy policies, but there is no international forum that brings these specialists together. Relevant players include national Finance ministries and competition agencies as well as sectoral authorities. Many international organizations collect information on and monitor the use of subsidy instruments, notably the IMF and the OECD, but also UN bodies and specialized sectoral organizations. Mobilizing an epistemic community that builds bridges across these entities could help prepare the ground for deeper cooperation in this area. This could start with mapping what types of data are already being collected, what more is needed, and foster the information sharing necessary to build trust. Considering the use of indicators can help legitimate the overall program, as was done for agriculture by the OECD with the PSE.

Development of a body of professionally competent, peer reviewable, internationally balanced work can be developed – as already pioneered by the OECD on a sectoral basis (e.g., the OECD studies on aluminium and semiconductors) will generate common ways of talking about and thinking about the issue of subsidies. For all the differences in national regimes, it seems probable that (like the area of competition policy) this may support agreement over time on good practice norms and standards. As those become more widely accepted, national governments can legitimate subsidy policy internationally by adopting those standards. The more this is treated as a technical, not a political, endeavor the greater the likelihood of an epistemic community on subsidy issues taking root.

Such efforts will need an institutional anchor. The WTO is the obvious candidate. Even though it may seem unlikely the membership will be willing to give the secretariat a mandate to take on the type of analytical role that has been played by the OECD secretariat, the WTO can and should provide a platform to those members willing to invest resources into such an effort. This could take the form organization of regular thematic sessions of the ASCM Committee;[50] a Working Party that spans different WTO bodies that are concerned with subsidy matters including those where no rules exist presently (e.g., services); or a new plurilateral effort along the lines of the ‘joint statement initiatives’ launched at MC11.[51] The scope for the formation of clubs spanning the major protagonists was illustrated by the G20 GFSEC, mentioned previously. It would be desirable that such efforts draw on the WTO secretariat, but if not it is important that the WTO be represented and can report to the WTO membership on the activities that are undertaken by the group.[52]

Possible focal points for bringing together entities with the needed expertise and resources include the G20 Trade and Investment Working Group (TIWG),[53] technical networks of regulators such as the International Competition Network (ICN), an informal grouping of agencies that cooperate in areas of competition policy,[54] and independent groups of experts such as the Global Trade Alert and the International Institute for Sustainable Development’s Global Subsidies Initiative, which supports international processes, national governments and civil society organizations to align subsidies with sustainable development by promoting transparency on the nature and size of energy subsidies;

[50] See Wolfe (2020c) for a discussion of thematic sessions and proposals to expand their use. This could incorporate and build on the practice of WTO members raising ‘specific trade concerns’ in WTO bodies dealing with different issue areas – see Wolfe (2020b).

[51] For discussion of open plurilateralism; see Hoekman and Mavroidis (2015) and Hoekman and Sabel (2019). Shaffer et al. (2015) and Wolfe (2017) argue that informal (‘soft’) law approaches centered around increasing transparency could be organized on a critical mass basis, using a ‘reference paper’ approach.

[52] One of the downsides of the EU-Japan-US trilateral subsidy discussions is that they are closed.

[53] This working group includes the major international organizations, i.e., the IMF, OECD, World Bank, as well as the WTO and provides a forum for coordination of the activities of the organizations in areas defined by G20 members.

[54] The ICN was formed in 2001 by national competition agencies in part because of the effort to launch negotiations on competition policy in the WTO in the early 2000s. See Kovacic and Hollman (2011).

evaluating their economic, social and environmental impacts and advising on how inefficient and wasteful subsidies can best be reformed.[55]

Preparing the ground

We are very cognizant that moving forward along the lines sketched out above is a challenging task. It requires buy-in by the major players (notably US, EU, China), a major hurdle in the current environment. MC12 is the obvious focal point for the launch of an initiative on subsidies and to give political direction to the effort. This can take the form of an 18-month work program aiming at recommendations to be considered at MC13 organized around type of deliberation and analysis advocated in this paper. WTO members have done this many times before. Such an initiative will benefit all members, including the major trading powers, by allowing them to call a time out on the current focus on bilateral and trilateral talks and unilateral threats, in the process signaling that they recognize the importance of plurilateral if not multilateral solutions to subsidy-related conflicts. Such an effort is not just relevant for China. The renewed emphasis by the EU on reducing greenhouse gas emissions and its intention of using trade policy instruments to this effect calls for agreement to manage the risk of intensifying trade conflicts.

An important area of focus of a work program should be to address the information gap. This should involve the nascent epistemic community mentioned above, drawing on both international organizations and specialized bodies, including think tanks and NGOs, and make use of web scraping technologies, as is already done by the Global Trade Alert. Reaching out to the business community and soliciting their participation in data collection would not only tap another source of knowledge but help generate the political support needed to engage in the effort. Companies that are active in the international market can be a good source of information as well help to identify what types of policies have the greatest effect on competition in the market. Working with the private sector raises new governance challenges for the WTO, including a need to deal credibly with confidentiality concerns and to address potential bias, but this is something that many international organizations and national statistical offices have experience in handling.

In considering how best to organize an effort to document and analyse subsidies it is important to reflect on the experience of the most recent and relevant international effort to develop a platform for joint action on subsidies, the GFSEC. In some respects this was sui generis in that it focused on just one sector, steel, and could draw on expertise at the OECD, an international organization with deep knowledge of the sector, based on the operation a Steel Committee that has been operation since 1978. Distinguishing features of the GFSEC were that the exercise had high level political support because it was both a G20 initiative and was launched while China held the presidency. Such high-level demand and support is likely to be a necessary condition for success – one of the lessons that can be drawn from the experience with the PSE (Wolfe, 2020a). The GFSEC case illustrates the importance of both establishing trust among parties and the ability of the parties to trust the intermediary "clearing house" organization.

A distinct features of the GFSEC was the obligation imposed on the OECD secretariat to maintain confidentiality of data provided – including within the organization. The OECD was required to agree to nondisclosure agreements prohibiting publication of data provided by participating governments and limits on what it was permitted to do in the way of analysis or putting information on the table – including data that had already been compiled by and for the OECD Steel Committee. One reason for this was that some of the major global players in the steel sector are not OECD members. Members defined the contours of the policy focus of GFSEC activities – measures deemed to result in or sustain excess capacity – as opposed to a broader view of policies. The GFSEC did not seek to establish a comprehensive baseline dataset spanning all steel-related policy support provided by different levels of governments in a country. A consequence was an inability to assess the effects of policies, even if the

55 See https://www.iisd.org/gsi/about.

OECD had been mandated to so, which it was not. The type of analysis done by the OECD on aluminium and semiconductors for its Trade Committee was not done for steel because of the circumscribed mandate given to and by the GFSEC. Although the GFSEC helped governments to better understand their own national policies and those of other countries, the experience suggests careful consideration be given to trade-offs associated with seeking a mandate from the G20 to establish a platform to consider subsidies.

7. Conclusion

The basic thrust of the argument made in this paper is that international cooperation to establish a framework of rules to guide both the use of domestic subsidies and responses by governments to the spillover effects of foreign subsidies should draw on the theory of economic policy. The current framework embodied in the ASCM that makes all subsidies either prohibited or actionable is not fit for purpose in an interdependent world economy in which production is fragmented over many countries, nation states confront major collective action challenges and market failures, and governments are expected to deliver public goods and attain noneconomic/equity objectives.

In 2018, the EU, Japan and the US launched a trilateral process to identify ways to strengthen disciplines on subsidies,[56] suggesting expansion of the list of prohibited subsidies in the WTO to include SOEs, open-ended financial guarantees, subsidies to insolvent or failing companies with no credible restructuring plan, and preferential pricing for inputs. The trilateral process is looking to add to the ASCM (and case law) on this and establish criteria – "market tests" of various kinds. The fact that these major players are talking to each other is a positive feature. Drafting exercises that build on the ASCM and new disciplines negotiated among members of PTAs – notably the CPTPP and EU PTAs – appear to be a pragmatic response to changed circumstances but lack legitimacy because China is not at the table. Arguments that CPTPP is a good model because it includes Vietnam are somewhat disingenuous given the discrepancy in economic size with China, but elements of CPTTP may be a good basis for discussion. The same applies to the EU PTAs that differentiate between types of subsidies in the design of rules.

While recent PTAs offer some guidance, they do not address global spillovers – notably climate change. A narrow focus on 'the China problem' is misconstrued given the prevalence of subsidies and the basic presumption that tax/subsidy policies will often be efficient instruments to achieve legitimate objectives. What has been missing is the type of analysis called for by the theory of economic policy: taking seriously the purported goals of tax/subsidy policy; assessing the efficiency of the chosen instruments and assessing the associated cross-border competitiveness spillovers, if any. It is not clear to us that officials and legislatures have a solid evidence base on which to build. The focus of attention to date has been on (alleged) competitive distortions, not on what the theory of economic policy suggests should inform international rulemaking.

History offers guidance on how to proceed. Past episodes of major trade tensions and perceptions that the rules of the game needed to be bolstered/expanded led to establishment of work programs to help establish baselines, common understanding of the issues at stake and a potential agenda for negotiating a way forward. This was done after the failure of the 1982 GATT ministerial with national studies of services and the OECD-based work to measure agricultural support programs on a comparable basis. Similar initiatives are called for today. It implies calling a time out on attempts to re-write the rules of the game to address a specific perceived problem ('China') and prepare the ground for an effort that spans the subsidy agenda more broadly. Much information exists but much is missing or incomplete.

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[56] See, e.g., Joint Statement on Trilateral Meeting of the Trade Ministers of the United States, Japan, and the European Union, 9 January 2019. At: https://ustr.gov/about-us/policy-offices/press-office/press-releases/2019/january/joint-statement-trilateral-meeting. The latest statement can be found at https://trade.ec.europa.eu/doclib/docs/2020/january/tradoc_158567.pdf.

The first order of business should be to develop a comprehensive baseline. We cannot rely on finger-pointing and allegations that may reflect private rent-seeking interests. While putting together a subsidy baseline is challenging and will require investment of resources, the benefit-cost ratio of doing arguably is very high.[57] A joint initiative that encompasses the relevant specialized international organizations to develop and apply appropriate measures and analysis of subsidy policies would provide the technical basis for more informed discussion and the design of cooperation in this area. The G20 Trade and Investment Working Group, an existing mechanism that includes the core international agencies and in which the major emerging economies are members, could be the focal point of such an initiative.

This is not to say that countries should not use the instruments they have to address competitive distortions. WTO members can use CVDs to offset subsidies embodied in imported goods if these are found to in jure domestic industries. They can exclude Chinese firms from public procurement markets without violating their WTO commitments. They can control inward FDI and M&A. They can respond to foreign export credit subsidies that escape WTO prohibitions on export subsidies through export support mechanisms of their own – something they already do (Dawar, 2020). There is no need to emulate the Trump administration and violate WTO rules and commitments. Governments are not naked—if they feel a need to intervene to offset perceived competitive distortions created by foreign subsidies, they have many levers to pull.

The WTO should provide a platform to members willing to invest resources into a work program to compile information and analyze existing subsidy programs in systemically important economies, bringing together the epistemic community with expertise and interest in subsidies. This could include organizing regular thematic sessions of the WTO Committee dealing with subsidies; creating a dedicated Working Party spanning different WTO bodies concerned with subsidy matters, including those where no rules exist presently (e.g., services); or launching a new plurilateral effort along the lines of the 'joint statement initiatives' launched in 2017 at the 11th WTO Ministerial Conference.

A first step can be taken at the next WTO ministerial conference by launching a international work program on subsidies. This may be criticized as kicking the can down the road. It is not. WTO members simply do not have sufficient information to develop a common understanding of where new rules are needed and the form they should take. Calling a time out on the current focus on unilateral action and bilateral/trilateral talks to establish such an understanding is a necessary condition for keeping the WTO relevant in the 21st century.

[57] Simon Evenett, the Director of the Global Trade Alert, estimates that a building a comprehensive dataset on subsidies for the G20 countries could be done at a cost of some €3-4 million. In 2019 the WTO annual budget was US$200 million. That of the OECD was US$400 million.

References

Abbott, Kenneth W. (2012). “The Transnational Regime Complex for Climate Change.” *Environment and Planning C: Government and Policy*, V.30-#4, 571-90.

Abbott, Kenneth W. and Duncan Snidal (2009). “The Governance Triangle: Regulatory Standards Institutions and the Shadow of the State,” in W. Mattli and N. Woods eds, *The Politics of Global Regulation.* Princeton: Princeton University Press, 44-88.

Bagwell, Kyle and Robert W. Staiger (2002). *The Economics of the World Trading System*. Cambridge, Mass.: MIT Press.

Baldwin, Richard E. (2016). *The Great Convergence: Information Technology and the New Globalization*. Cambridge: Harvard University Press.

Bednar, Jenna (2009). *The Robust Federation: Principles of Design*. New York: Cambridge University Press.

Bekkers, Eddy; Joseph Francois; Douglas R. Nelson and Hugo Rojas-Romagosa (2020). “Trade Wars: Nobody Expects the Spanish Inquisition,” in B. Hoekman and E. Zedillo eds, *21st Century Trade Policy: Back to the Past?* Washington, DC: Brookings Institution, forthcoming,

Bloningen, B. (2016). “Industrial Policy and Downstream Export Performance,” *Economic Journal*, 126(595): 1635-59.

Blonigen, B. and W. Wilson (2010). “Foreign subsidization and excess capacity,” *Journal of International Economics*, 80(2): 200-211.

Bolton, Patrick; Joseph F Brodley and Michael H Riordan (1999). “Predatory Pricing: Strategic Theory and Legal Policy.” *Georgetown Law Journal*, V.88-#8, 2239-330.

Brander, James A. and Barbara J. Spencer (1985). “Export Subsidies and International Market Share Rivalry.” *Journal of International Economics*, V.18-#1, 83-100.

Branstetter, Lee and Nicholas Lardy (2008). “China's Embrace of Globalization,” in L. Brandt and T. G. Rawski eds, *China's Great Economic Transformation.* New York: Cambride University Press, 633-82.

Burgess, Michael (2006). *Comparative Federalism: Theory and Practice*. New York: Routledge.

Capobianco, A. and H. Christiansen (2011). "Competitive Neutrality and State-Owned Enterprises: Challenges and Policy Options," OECD Corporate Governance Working Papers, No. 1, Paris.

Chemerinsky, Erwin (2019). *Constitutional Law: Principles and Policies*. New York: Wolters Kluwer.

Coenen, Dan T. (1998). “Business Subsidies and the Dormant Commerce Clause.” *The Yale Law Journal*, V.107-#4, 965-1053.

Corden, W. Max (1997). *Trade Policy and Economic Welfare*. Oxford: Oxford University Pres.

Cosbey, Aaron and Petros C. Mavroidis (2014). "Turquoise Mess: Green Subsidies, Blue Industrial Policy and Renewable Energy: The Case for Redrafting the Subsidies Agreement of the WTO," *Journal of International Economic Law,* 17(1): 11-47.

Costinot, Arnaud and Iván Werning (2019). “Lerner Symmetry: A Modern Treatment.” *American Economic Review: Insights*, V.1-#1, 13-26.

Council of the European Union (2019). "Regulation (EU) 2019/452 establishing a framework for screening of foreign direct investments into the European Union." Official Journal of the European Union LI 79/1.

Dawar, K. (2020). "Official Export Credit Support: Competition and Compliance Issues," *Journal of World Trade*, forthcoming. Prepublication version at: http://respect.eui.eu/publications/.

Deardorff, A. (1987). "Safeguards Policy and the Conservative Social Welfare Function," in. H. Kierzkowski, ed., *Protection and Competition in International Trade: Essays in Honor of W. M. Corden*, Oxford: Blackwell, 22-40.

Dixit, Avinash K. (1987). "On Pareto-Improving Redistributions of Aggregate Economic Gains." *Journal of Economic Theory*, V.41-#1, 133-53.

Eisner, Marc Allen (1991). *Antitrust and the Triumph of Economics: Institutions, Expertise, and Policy Change*. Chapel Hill: University of North Carolina Press.

Ethier, Wilfred J. (2001). "Theoretical Problems in Negotiating Trade Liberalization." *European Journal of Political Economy*, V.17-#2, 209-32.

Evenett, Simon J., (2019) 'Protectionism, State Discrimination, and International Business since the Onset of the Global Financial Crisis,' *Journal of International Business Policy* 2:1 9-36.

Finlayson, Jock A. and Mark W. Zacher (1981). "The GATT and the Regulation of Trade Barriers: Regime Dynamics and Functions." *International Organization*, V.35-#4, 561-602.

Friederiszick, Hans, Lars-Hendrik Röller and Vincent Verouden. 2008. "European State Aid Control: an economic framework," in P. Buccirossi (ed.), *Handbook of Antitrust Economics*. MIT Press, 625-69.

Gutiérrez, Germán and Thomas Philippon (2019). "How EU Markets Became More Competitive Than US Markets: A Study of Institutional Drift," *NBER Working Paper*, #24700.

Haas, Peter M. (1992). "Introduction: Epistemic Communities and International Policy Coordination." *International Organization*, V.46-#01, 1-35.

Hall, Peter A. and David W. Soskice eds**. (**2001). *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. New York: Oxford University Press.

Hancké, Bob (2009). *Debating Varieties of Capitalism: A Reader*. Oxford ; New York: Oxford University Press.

Hatta, Tatsuo (1977). "A Theory of Piecemeal Policy Recommendations." *The Review of Economic Studies*, V.44-#1, 1-21.

Hoekman, B. (2016). "Subsidies, Spillovers and WTO Rules in a Value Chain World," *Global Policy*, At: DOI: 10.1111/1758-5899.12327.

Hoekman, B. (2018). "Reducing Home Bias in Public Procurement: Trade Agreements and Good Governance," *Global Governance*, 24(2), 249-65.

Hoekman, Bernard M. and Petros C. Mavroidis (2015). "Embracing Diversity: Plurilateral Agreements and the Trading System." *World Trade Review*, V.14-#1, 101-16.

Hoekman, Bernard and Douglas Nelson. (2020). "Subsidies, Spillovers and Multilateral Cooperation," in B. Hoekman and E. Zedillo (eds.), *21st Century Trade Policy: Back to the Past?* Brookings Institution, forthcoming.

Hoekman, Bernard and Charles Sabel (2019). "Open Plurilateral Agreements, International Regulatory Cooperation and the WTO." *Global Policy*, V.10-#3, 297-312.

Hofmann, C., A. Osnago and M. Ruta, (2019). "The Content of Preferential Trade Agreements," *World Trade Review* 18(3): 365-98.

Horlick, G. and P. Clarke. (2010). "WTO Subsidy Disciplines During and After the Crisis." *Journal of International Economic Law*, 13(3): 859–74.

Hughes, Christopher R. (2006). *Chinese Nationalism in the Global Era*. London ; New York: Routledge.

Iversen, Torben (2005). *Capitalism, Democracy, and Welfare*. Cambridge: Cambridge University Press.

Johnson, Robert C. (2018). "Measuring Global Value Chains." *Annual Review of Economics*, V.10-#1, 207-36.

Kapstein, Ethan Barnaby (1992). "Between Power and Purpose: Central Bankers and the Politics of Regulatory Convergence." *International Organization*, V.46-#01, 265-87.

Kawase, Tsuyoshi and Ambashi, Masahito (2018). "Disciplines on State-Owned Enterprises under the Trans-Pacific Partnership Agreement: Overview and Assessment," ERIA Working Paper DP-2017-13.

Kemp, Murray C. (1960). "The Mill-Bastable Infant-Industry Dogma." *Journal of Political Economy*, V.68-#1, 65-67.

Kovacic, W. and H. Hollman (2011). "The International Competition Network: Its Past, Current, and Future Role," *Minnesota Journal of International Law*, 20: 274-323.

Kowalski, P., M. Buge, M. Sztajerowska and M. Egeland. (2013). "State-Owned Enterprises: Trade Effects and Policy Implications." OECD Trade Policy Papers, No. 147. Paris: OECD.

Krugman, Paul R. (1984). "Import Protection as Export Promotion: International Competition in the Presence of Oligopoly and Economies of Scale," in H. Kierzkowski ed *Monopolistic Competition in International Trade.* Oxford: Oxford University Press, 180-93.

Lardy, Nicholas R. (2014). *Markets over Mao: The Rise of Private Business in China*. Washington, DC: Peterson Institute for International Economics.

Lerner, Abba P. (1936). "The Symmetry between Import and Export Taxes." *Economica*, V.3-#11, 306-13.

Lipsey, R. G. and Kelvin Lancaster (1956). "The General Theory of Second Best." *The Review of Economic Studies*, V.24-#1, 11-32.

Livermore, Michael A (2006). "Authority and Legitimacy in Global Governance: Deliberation, Institutional Differentiation, and the Codex Alimentarius." *New York University Law Review*, V.81-#2, 766-801.

Maher, Imelda (2002). "Competition Law in the International Domain: Networks as a New Form of Governance." *Journal of Law and Society*, V.29-#1, 111-36.

Mas-Colell, Andreu; Michael Whinston and Jerry Green (1995). *Microeconomic Theory*. New York: Oxford University Press.

Maskus, K. (2105), "Research and Development Subsidies: A Need for WTO Disciplines?," at http://e15initiative.org/publications/research-and-development-subsidies-a-need-for-wto-disciplines/.

Mavroidis, Petros C. (2016). "Subsidies," in *The Regulation of International Trade: V. 2 the WTO Agreements on Trade in Goods.* New York: Cambridge University Press, 185-312.

Meade, James E. (1955). *Trade and Welfare: Mathematical Supplement*. Oxford: Oxford University Press.

Neven, D. and Vincent Verouden. (2008). "Towards a more refined economic approach in State aid control," in W. Mederer, N. Pesaresi, M. Van Hoof (eds.), *EU Competition Law - Volume IV: State Aid*. Leuven: Claeys & Casteels.

OECD, (2011). *Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels* (Paris: OECD.

OECD. (2016). *State-Owned Enterprises as Global Competitors: A Challenge or an Opportunity?,* Paris: OECD.

OECD. (2017). "Support to Fisheries: Levels and Impacts," OECD Food, Agriculture and Fisheries Papers, No. 103.

OECD. (2019a). *Agricultural Policy Monitoring and Evaluation 2019*, Paris: OECD.

OECD. (2019b). "Levelling the Playing Field: Measuring and addressing trade-distorting Government Support," OECD Global Forum on Trade. At https://www.oecd.org/trade/events/documents/oecd-gft-2019-summary-record.pdf.

OECD. (2019c). "Measuring distortions in international markets: the aluminium value chain," OECD Trade Policy Papers No. 218.

OECD. (2019d). "Measuring Distortions in International Markets: The Semiconductor Value Chain," OECD Trade Policy Papers No. 234.

Ossa, R. (2017). "A Quantitative Analysis of Subsidy Competition in the US," At https://pdfs.semanticscholar.org/b97e/272a372e27e344c0604ec31f00a4182004c2.pdf.

Philippon, Thomas (2019). *The Great Reversal: How America Gave up on Free Markets*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.

Polanyi, Karl (1944). *The Great Transformation: The Political and Economic Origins of Our Time*. New York: Farrar & Rinehart.

Rubini, L. (2017). "The Age of Innocence. The evolution of the case-law of the WTO dispute settlement: Subsidies as case-study," in M. Elsig, B. Hoekman and J. Pauwelyn (eds.), *Assessing the World Trade Organization. Fit for Purpose?* Cambridge: Cambridge University Press, 276-317.

Rubini, L. (2020). "The regulation of subsidies," in Preferential Trade Agreements," in A Mattoo, N Rocha and M Ruta (eds), *Handbook of Deep Trade Agreements.* Washington DC: World Bank, forthcoming.

Rubini, L. and T. Wang. (2020). "The regulation of state enterprises in PTAs," in A Mattoo, N Rocha and M Ruta (eds), *Handbook of Deep Trade Agreements.* Washington DC: World Bank, forthcoming.

Ruggie, John G. (1982). "International Regimes, Transactions, and Change: Embedded Liberalism in the Post-War Economic Order," *International Organization*, V.36-#2, 379-415.

Sachse, Sara (1999). "United We Stand-but for How Long-Justice Scalia and New Developemtns of the Dormant Commerce Clause." *St. Louis University Law Journal*, V.43, 695-722.

Scharpf, Fritz Wilhelm (1997). *Games Real Actors Play: Actor-Centered Institutionalism in Policy Research*. Boulder, Colo.: Westview Press.

Schumpeter, Joseph Alois (1942/1975). *Capitalism, Socialism, and Democracy*. New York: Harper & Row.

Shaffer, G. R. Wolfe and V. Le. (2015). "Can Informal Law Discipline Subsidies?" *Journal of International Economic Law,* 18(4): 711–741.

Sykes, Alan O. (2005). "Subsidies and Countervailing Measures," in P. F. J. Macrory, A. E. Appleton and M. G. Plummer eds, *The World Trade Organization: Legal, Economic and Political Analysis.* Boston, MA: Springer US, 1682-706.

Tarullo, Daniel K. (2000). "Norms and Institutions in Global Competition Policy." *American Journal of International Law*, V.94-#3, 478-504.

Thelen, Kathleen Ann (2014). *Varieties of Liberalization and the New Politics of Social Solidarity*. Cambridge ; New York, N.Y.: Cambridge University Press.

Turunen-Red, Arja H. and Alan D. Woodland (2002). "Unilateral Reforms of Trade and Environmental Policy," in A. D. Woodland ed *Economic Theory and International Trade: Essays in Honour of Murray C. Kemp*. Cheltenham, U.K.: Edward Elgar, 124-40.

Venables, Anthony J. (1985). "Trade and Trade Policy with Imperfect Competition: The Case of Identical Products and Free Entry." *Journal of International Economics*, V.19-#1, 1-19.

Waarden, Frans van and Michaela Drahos (2002). "Courts and (Epistemic) Communities in the Convergence of Competition Policies." *Journal of European Public Policy*, V.9-#6, 913-34.

Wilks, Stephen (2005). "Agency Escape: Decentralization or Dominance of the European Commission in the Modernization of Competition Policy?" *Governance-an International Journal of Policy and Administration*, V.18-#3, 431-52.

Willetts, Peter (2011). *Non-Governmental Organizations in World Politics : The Construction of Global Governance*. New York: Routledge.

Wolfe, R. (2017). "Sunshine over Shanghai: Can the WTO Illuminate the Murky World of Chinese SOEs?" *World Trade Review* 16(4): 713-32.

Wolfe, Robert. (2018). "Is WTO information good enough? How a systematic reflection by members on transparency could promote institutional learning," Background paper for the Bertelsmann project on the Future of Global Trade Governance

Wolfe, R. (2020a). "Yours is bigger than mine! How an index like the PSE helps in understanding the comparative incidence of subsidies," Bertelsmann Stiftung, in process.

Wolfe, Robert. (2020b). "Improving the use of 'specific trade concerns' in WTO conflict management," Bertelsmann Stiftung, in process.

Wolfe, Robert. (2020c). "Informal learning and WTO renewal: Using thematic sessions to create more opportunities for dialogue," Bertelsmann Stiftung, in process.

Wu, Mark (2016). "The China, Inc. Challenge to Global Trade Governance." *Harvard International Law Journal*, V.57-#2, 261-324.

Yates, JoAnne and Craig Murphy (2019). *Engineering Rules: Global Standard Setting since 1880*. Baltimore: Johns Hopkins University Press.

Zheng, Yongnian (2004). *Globalization and State Transformation in China*. New York: Cambridge University Press.

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