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Could an Index like the PSE Help in Understanding the Comparative Incidence of Industrial Subsidies?

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Content

Abstract

State support remains a leading cause of tension in international commercial relations. Governments can see trade distortions that look like they were caused by industrial subsidies, but they lack the data to illuminate that state support. In the 1980s at the height of the farm wars the Organisation for Economic Co-operation and Development (OECD) developed an index that helped countries to see the overall incidence of agricultural subsidies, initially called the Producer Subsidy Equivalent (PSE) and the Consumer Subsidy Equivalent (CSE). Are there lessons for today in the PSE approach? In this paper I try to answer that question from the standpoint of economics: how did the PSE evolve, what is it, is the concept relevant to industrial subsidies? And of politics: how was OECD able to create the tool, and do present conditions permit something similar? The brief answer is that the PSE was a response to a shared perception of crisis, but it was pushed by finance not trade or agriculture ministers. It drew on well-established concepts in the agricultural economics and trade literatures. And it works best in a context where market power is sufficiently diffuse that a price gap between domestic and world prices can be calculated. Only some of those conditions can be met when applying the approach to concentrated industries dominated by large firms that operate in multi-country supply chains.

Key words: Agricultural subsidies, industrial subsidies, fossil fuel subsidies, index, aluminium, semiconductors, steel

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Bertelsmann Stiftung and WTO Reform

If international trade is not governed by rules, mere might dictates what is right. The World Trade Organization (WTO) serves as a place where trade policy issues are addressed, disputes arbitrated, legal frameworks derived and enforced. Through these functions, the WTO ensures that the rules of trade policy are inspired by fairness and reciprocity rather than national interest. It is more important than ever to vitalise the global public good that it represents against various threats that have been undermining it.

The Global Economic Dynamics project of Bertelsmann Stiftung is a firm believer in rules-based international trade and the WTO. In 2018, we published an extensive report with propositions on how to revitalise the WTO, based on the deliberations of our High-Level Board of Experts on the Future of Global Trade Governance. In 2019 and 2020, we follow up on this report with a series of policy contributions, providing fresh ideas and elaborating on concepts already introduced in the report. These contributions cover the areas of the Appellate Body crisis, dealing with the competitive distortions caused by industrial subsidies, enabling Open Plurilateral Agreements within the WTO while providing reassurance to concerns of the membership at large with such forms of flexible cooperation and, finally, improving working practices in WTO Committees.

We are grateful to Professor Robert Wolfe for his expertise and advice which have been a strong support for our WTO activities in general and for this paper specifically.

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Executive Summary

State support for industry remains a leading cause of tension in international commercial relations. Governments can see distortions that look like they were caused by industrial subsidies offered by other countries, but they lack the data to illuminate that state support.

We have been here before. In the early 1980s countries knew that some of the problems in farm trade were caused by subsidies, but fingers were pointed in all directions. The Organisation for Economic Co-operation and Development (OECD) was tasked with the analytic work that became instrumental in supporting the Uruguay Round of trade negotiations in the GATT, launched in 1986.

In the course of that work the OECD developed an index that helped countries to see the overall incidence of agricultural subsidies, the Producer Subsidy Equivalent, now called Producer Support Estimate (PSE). Are there lessons for today in the PSE approach?

In this paper I try to answer that question from the standpoint of economics: how did the PSE evolve, what is it, is the concept relevant to industrial subsidies? And of politics: how was the OECD able to create the tool, and do present conditions permit something similar?

What is the PSE?

The OECD originally defined a PSE as “the payment that would be required to compensate farmers for the loss of income resulting from the removal of a given policy measure.” The creation of an index let everybody see disparate policy tools in one framework thus gaining an appreciation of the overall magnitude of the incidence and form of farm subsidies.

How and why the PSE was created

The PSE was created in a fortuitous conjunction of

- structural change in agriculture (from fears of shortage to managing a surplus)
- the development of new ideas, and
- political pressure from finance ministers in response to a perception shared by all the major players of crisis in world agricultural commodity markets.

Countries understood and accepted the main message of the OECD’s landmark 1987 report that national policies and agricultural trade have to be considered together.

How the Uruguay Round negotiators used the PSE

The PSE is useful if the objective is the reform of *agricultural policy* not the reform of *trade policy*—it measures monetary transfers that may distort national resource allocation without necessarily distorting international trade. The PSE is an economist’s tool; a trade agreement is a legal tool.

The PSE helped show that the Uruguay Round negotiation framework would need to be comprehensive and it would need to encompass domestic agricultural policies in all the leading exporters and importers.

The PSE helped states grasp the extent of the problems, and the models that used it helped show the implications of liberalization, but the PSE had to be decomposed for negotiating purposes.

Attempts to use the PSE concept in other commodity sectors

The power of the PSE makes it an attractive tool for attempts to illuminate subsidies in other sectors, notably fisheries, biofuels and fossil fuel subsidies, where it has been influential for work in other international organizations.

The problems in other sectors also included whether and how to calculate MPS, and how to handle tax expenditures.

Does the OECD approach work for industrial subsidies?

When the OECD extended the framework to fossil fuel subsidies, one part of the work was the creation of a matrix showing how common types of support measures would be classified along two dimensions. The vertical axis is the transfer mechanism, or how a transfer is created, based on the WTO subsidies agreement; and the horizontal axis is statutory or formal incidence—to whom and what a transfer is first given.

In recent work the OECD has analyzed industrial subsidies in two sectors, aluminium and semiconductors using this matrix approach, which suggests different places to look for subsidies, depending on the sector.

Both new studies use a firm-level analysis without country-level aggregation given the challenge of tracking support and its potential trade impacts up and down the value chain.

Comparing the PSE for agriculture with the matric approach to aluminium and semiconductors

Developing the PSE in the 1980s left many members exposed, so how did the OECD get away with it?

1. Many conceptual and methodological ideas were available in the agricultural economics and trade literatures.
2. The OECD helped countries see that they were all responsible, and that the benefit for any country from the reform of agricultural subsidies was greatest when all subsidizing countries collectively reformed.
3. The focus was mostly on commodities traded on world markets with relatively low degrees of product differentiation for which the production function is relatively simple.
4. The PSE works best in a context where market power is sufficiently diffuse that a price gap between domestic and world prices can be calculated.

The new reports differ from the work on PSEs:

1. These are concentrated industries dominated by large firms in a few countries.
2. The reports do not try to measure MPS, for familiar reasons: many of the firms are based in China, a market that is so big that there is said to be no way to tell if actions there depress the world price.
3. A focus on firms not countries precludes the creation of a PSE-type index, and makes it more difficult for governments to see themselves in comparison to others,

What lessons can we draw from the PSE example?

The motivation for this paper was a question about whether an index like the PSE would help governments to make progress on reform of industrial subsidies when WTO data are inadequate, and countries are sure that other governments' subsidies are larger than their own.

When there is uncertainty about what counts as a subsidy, formal notifications may not be the best way to enhance understanding of policies that might be affecting the health of the trading system.

But disciplines on subsidies begin with information, and this public good is under-supplied. Countries need to understand the incidence of subsidies before they can analyse the potential trade distortions, which is the prelude to discipline.

Finance ministers wanted the work done to identify and quantify agricultural support in the early 1980s and said so repeatedly in the annual meetings of the OECD Council. Neither the OECD Council nor the G20 has offered the same impetus now.

If the OECD PSE monitoring has made a difference, then further efforts to use the OECD approach to increase transparency might also make a difference by illuminating industrial subsidies in other sectors even if new WTO agreements remain out of reach.

The complexity of global value chains is part of why the OECD matrix was applied to firms but not countries in the aluminium and semiconductor studies, but WTO agreements focus on countries not firms, and they struggle to discipline the sub-national governments implicated in the support to these industries.

In the short term agreement on binding rules might not be possible—or needed, if work proceeds on developing more informal discipline on subsidies based on information and dialogue

Countries always want to believe that somebody else's subsidies are bigger than their own: this is not a competition that anybody wants to be seen to be winning. But by not creating robust comparisons of subsidies, everybody is losing.

Introduction

Governments are often confident that the subsidies provided to firms in other countries are large and pernicious, while support for their own producers or consumers is reasonable, legitimate, and essential for regional development, social stability or just countering the subsidies of their trading partners. Such misplaced confidence that your subsidies are bigger than mine is especially prevalent in this era of apparent economic nationalism.

When the trade ministers of the European Union, Japan and the United States met in January 2020, their major concern was finding ways to strengthen existing World Trade Organization (WTO) rules on industrial subsidies on the assumption that current rules are "insufficient to tackle market and trade distorting subsidization existing in certain jurisdictions." That objective would be easier to justify and to attain if more information were available on subsidies. The WTO ought to be a repository of high-quality data on subsidies, but it is not. Notifications of industrial subsidies are notoriously inadequate (Wolfe, 2018), and cannot tell us much about state-owned enterprises (SOEs) because of the absence of agreed rules (Wolfe, 2017). The WTO Director-General's annual monitoring reports ought to be an alternative, but the Secretariat stopped including data on "general economic support" because Members fail to provide the needed data, although it is obvious that the extent of subsidies remains significant (WTO, 2019, section 3.7; Evenett, 2019). Efforts to reduce tensions will require more transparency. The countries implicated need to understand the scope of the problem and that they are all complicit if negotiations are to succeed.

We have been here before. In the early 1980s countries knew that some of the problems in farm trade were caused by subsidies, but fingers were pointed in all directions. Many people recall that the Organisation for Economic Co-operation and Development (OECD) was tasked with the analytic work that became instrumental in supporting the Uruguay Round of trade negotiations in the GATT, launched in 1986. In the course of that work the OECD developed an index of farm support that helped countries to see the overall incidence of agricultural subsidies, the Producer Subsidy Equivalent (PSE) and the Consumer Subsidy Equivalent (CSE).[1]

Indexes are common in economics—inflation, unemployment, and GDP are all constructed to help citizens and policymakers understand their own economy, and to compare themselves with others. Every index is the answer to a question. The answer depends on definitions and decisions about what to measure. The last part proves controversial, because countries that heavily rely on a certain policy tool may resist including it in the index. The likely impacts on negotiations of a new indicator shape the debates on how it should be calculated. The choice made between calculating the effective rate of protection, or a PSE, or a trade restrictiveness index, affects the results (Anderson, 2003). But indexes let everybody see disparate policy tools in one framework thus gaining an appreciation of the overall magnitude, for example of the incidence and form of subsidies within a sector.

Are there lessons for today in the PSE approach? In this paper I try to answer that question from the standpoint of economics: how did the PSE evolve, what is it, is the concept relevant to industrial subsidies? And of politics: how was the OECD able to create the tool, and do present conditions permit something similar? The brief answer is that the PSE was a response to a shared perception of crisis in world agricultural commodity markets, but it was pushed by finance not trade or agriculture ministers. It drew on well-established concepts in the agricultural economics and trade literatures. And it works best in a context where market power is sufficiently diffuse that a price gap between domestic and world prices can be calculated. Perhaps most important, it emerged from and was endorsed by a series of multilateral meetings that included all the major players in the farm subsidy war.

Only some of those conditions are met today. The issue of industrial subsidies has not yet reached the point where major multilateral meetings are trying to find a way forward. And the trade literature is still developing the conceptual tools that would support negotiations. The PSE proved valuable as an index in creating a consensus

[1] The name was changed later, as discussed below. I use "PSE" throughout for convenience.

on the need for action. It proved just as valuable for the database of support measures on which it rests. Whether the concept could prove useful today depends on whether there is a consensus on the question an index could answer, and on what countries collectively would do with that answer.

In the next section of this paper I explain what the PSE is. In the second section I discuss how and why the OECD was able to undertake an enormous project that showed all of its Members in a poor light: the PSE was created in a fortuitous conjunction of structural change in agriculture (from fears of shortage to managing a surplus), the development of new ideas, and of political pressure from finance ministers. In the third section I explain how the PSE affected the Uruguay Round negotiations, before briefly outlining, in the fourth section, subsequent efforts to use the PSE concept to analyze subsidies in other sectors. In the fifth section I ask if the OECD approach works for industrial subsidies using the examples of steel excess capacity aluminium and semiconductors, which I then compare with the PSE for agricultural policy. The conclusion teases out the implications of the differences in drawing lessons for current efforts to discipline subsidies.

1 What is the PSE?

The OECD reports a number of different indicators of agricultural support. For convenience I refer to only one of them, the Producer Support Estimate (PSE). The OECD originally defined what was first called the Producer Subsidy Equivalent as “the payment that would be required to compensate farmers for the loss of income resulting from the removal of a given policy measure (OECD, 1987, 100).” Figure 1 shows how these policies were originally classified into the comprehensive PSE framework; it also shows the range of policies that had to be understood to be part of the trade regime.

Today’s list of policies captured by the PSE is considerably elaborated (OECD, 2019a), and the PSE is now defined as the “annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on farm production or income (OECD, 2016, Box 2.1).”[2]

[2] The definition was changed in 1991, and the name itself in 1999 from “Producer Subsidy Equivalent” to “Producer Support Estimate” because “It was recognised that: (a) transfers associated with a wide range of diverse policies have different “subsidy equivalents”; and (b) that some of the transfers were given for the provision of services and positive externalities rather than to subsidise the production of agricultural commodities. The more neutral term “support” acknowledges that a monetary transfer is involved whatever the policy objective (OECD, 2016, 22)” The acronyms, PSE and CSE remain unaltered.

Figure 1: PSE Classification by Type Measure

1. Market Price Support
    - Two price systems
    - Price premiums
    - Import quotas and voluntary restraint agreements
    - Tariffs and import levies
    - Export refunds/credits
    - Home consumption schemes
    - Supply management (production or acreage quotas)
    - Monopoly organizations (marketing boards, import control organizations)

2. Direct Income Suport
    - Direct payments (disaster, deficiency, headage or acreage, direct storage payments, etc.)
    - Embargo compensation
    - Levies paid by producers (negative support)

3. Indirect Income Support
    - Capital grants
    - Concessional credit (interest subsidies)
    - Input subsidies (fuel, fertilizer, transport, etc.)
    - Insurance
    - Storage

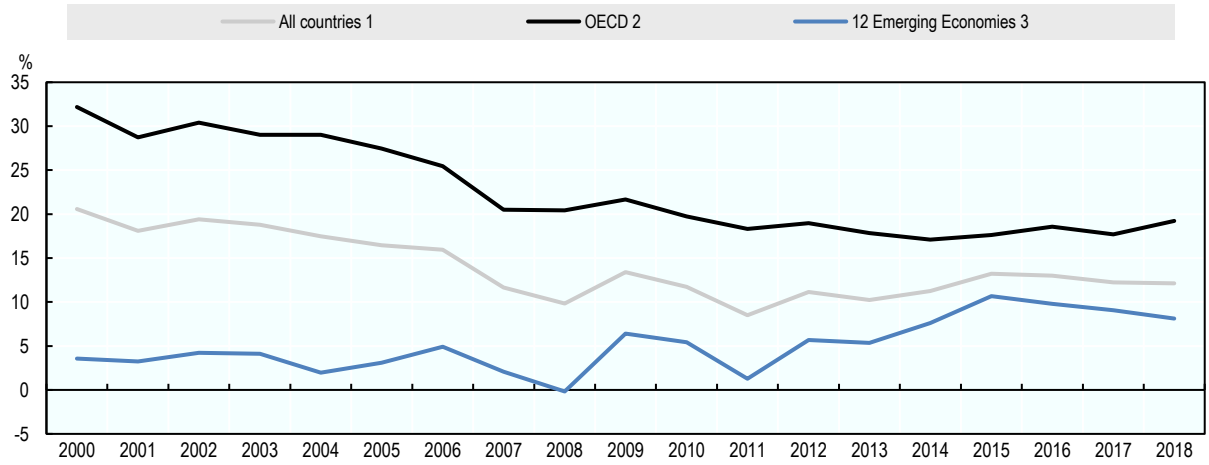
4. General Services
    - Research, advisory, training
    - Inspection
    - Rationalisation and structures
    - Processing and marketing
    - Transport concessions

5. Other Indirect Support
    - Taxation concessions
    - Sub-national measures

(Source: (OECD, 1987, 102; OECD, 1991, 251)

Figure 2 shows that such support as a percentage share of gross farm receipts has been steadily declining in OECD countries since the creation of the WTO but has been rising in emerging economies.

Figure 2 Evolution of the Producer Support Estimate, 2000 to 2018

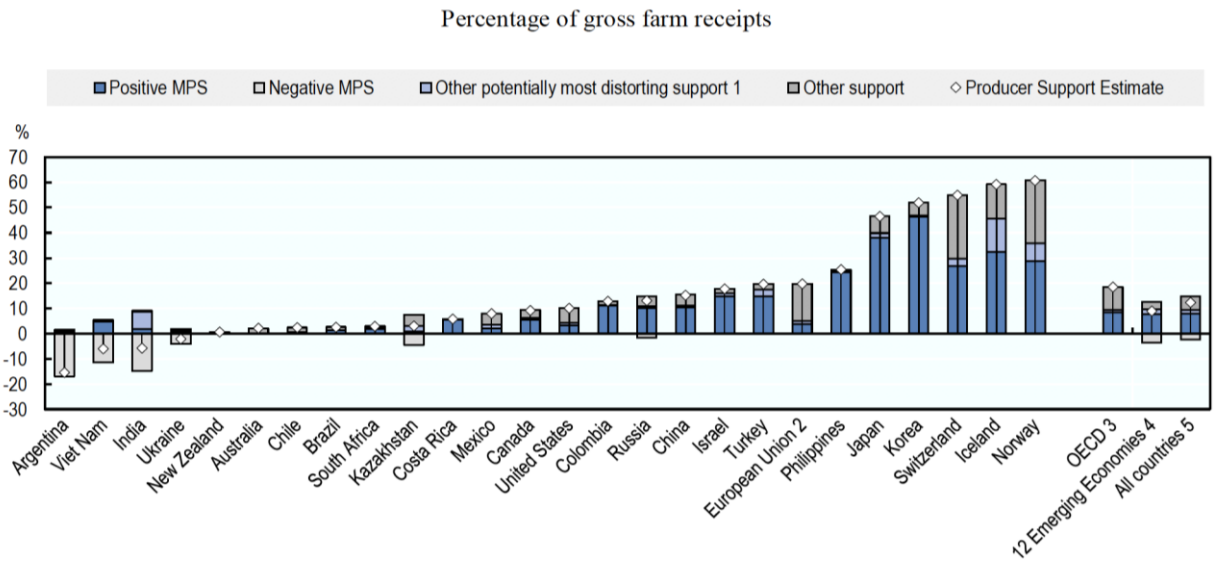


Notes: 1. The All countries total includes all OECD countries, non-OECD EU Member States, and the 12 Emerging Economies. 2. The OECD total does not include the non-OECD EU Member States. Latvia and Lithuania are included only from 2004. 3. The 12 Emerging Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.

Source: (OECD, 2019a, Figure 1.4)

Figure 3 shows the same measure at one point in time. It also decomposes the elements of the PSE, revealing that countries provide the majority of producer support through measures that are most distorting for production and trade. The monetary value of Norway's farm support may be much lower than the U.S. and Canada, but support is less than 10% of farm receipts in those countries compared to nearly 60% in Norway. Showing support as a percentage of gross farm receipts not as an absolute value better allows countries to see themselves in comparison with others.

Figure 3 Potentially most distorting transfers by country, 2016-18



Notes: Countries are ranked according to the %PSE levels.
1. Support based on output payments and on the unconstrained use of variable inputs.
2. EU28.
3. The OECD total does not include the non-OECD EU Member States.
4. The 12 Emerging Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Viet Nam.
5. The All countries total includes all OECD countries, non-OECD EU Member States, and the Emerging Economies.

Source: (OECD, 2019a, Figure 1.9)

2 How and why the PSE was created

Agriculture was nominally if weakly covered by the GATT 1947, but in 1955 the U.S. requested and received a waiver under GATT Article XXV that largely exempted its domestic farm programs, especially dairy, from multilateral scrutiny; other Contracting Parties soon found their own ways around the rules to protect their most sensitive sectors. Still, the well-established domestic agricultural policies of the industrialized countries caused few troubles for anybody but the taxpayers who supported them until an unhappy conjuncture of factors led to extreme conflict between the principal grain exporters that cost billions of dollars in subsidies; by the early 1980s states were at war over farm trade (Wolfe, 1998; Legg, 2019). Ending the war would require more data on what was happening, and some way to make use of the data. Obtaining the data and developing the tools required both conceptual innovation and political support. The result would embarrass the governments involved. So how did the OECD get away with it?

The sense that something had to be done can be traced in the declarations of major international meetings. The main concern of the UN Food and Agriculture Organisation (FAO) in the 1970s was food sufficiency, with some reason: the 1974 World Food Conference was a response to fears of a global food shortage. Agricultural subsidies were not mentioned in the declaration launching the GATT Tokyo Round (1973-79) independent of subsidies in general. At the 1982 GATT ministerial, however, trade ministers decided “To bring agriculture more fully into the multilateral trading system” and to conduct an examination of “all measures affecting trade, market access and competition and supply in agricultural products, including subsidies and other forms of assistance.”

The road to new negotiations was rocky. French President François Mitterrand briefly walked out of the Bonn G7 Summit in 1985 because of his reluctance to agree to negotiations on agriculture. In May 1986 the acknowledgement by G-7 Leaders of “long-standing policies of domestic subsidy and protection of agriculture in all our

countries" laid the basis for the Punta del Este declaration later in 1986 that said that the Uruguay Round negotiations should aim at "improving the competitive environment by increasing discipline on the use of all direct and indirect subsidies and other measures affecting directly or indirectly agricultural trade, including the phased reduction of their negative effects and dealing with their causes…." At the 1987 Venice G7 Summit, leaders devoted four paragraphs to agriculture, recognizing the problem caused by the surplus for developed and developing countries alike. By the mid-1980s, therefore, governments at the highest levels knew that they were in a farm war, and that finding a way to end it was a central problem for the Uruguay Round.

What happened between 1974 when hunger was the headline problem and 1987 when it was clear, at least to rich countries, that subsidies were the problem, and everyone was implicated? The answer in part was the creation of an index to compare the incredible diversity of farm support policies across countries. The policies captured in that index, the PSE, are shown in Figure 1 below.

The basic index concept was clearly articulated in the Haberler Report's recommendation of an "equivalent tariff" in 1958. These experts saw that protectionism was a consequence of agricultural support schemes. They argued that "The most satisfactory measure of the degree of agricultural protectionism in such schemes would be a comparison between the total return actually received by the domestic farmer for his production and the return which would correspond to the ruling world price. We recommend that the FAO and the GATT should make a joint study of the possibility of measuring degrees of agricultural protectionism on these lines (GATT, 1958, 9, 81-4)."

One of the reasons for the slow progress of agricultural reform was the difficulty in giving effect to this recommendation. During the Kennedy Round in the 1960s, the EU introduced the idea of a *montant de soutien* under which existing support margins would be bound, much like a tariff binding, limiting any increase in protection. The proposal had the virtue of rolling any variety of instruments into one index of trade distortion on a basis that would be comparable across products and countries. The idea was not a success, however, in part because of the way it appeared to treat importers and exporters differently (Warley, 1976, 383-85).

Work did continue at FAO during the 1970s. Two papers prepared there by Tim Josling (FAO, 1973; FAO, 1975) later formed the basis for the crucial work at the OECD. The 1973 paper explained why developed country farm policies should be monitored, and introduced two new indexes, the Producer Subsidy Equivalent (PSE), and the Consumer Tax Equivalent (CTE). The 1975 paper further developed the concepts.[3] Josling was a student of Max Corden; the notion of a "subsidy equivalent" derives from the economic theory of protection he developed in the 1960s to evaluate the effects of tariffs (Corden, 1971; OECD, 2016, 21).

The FAO did not welcome these ideas in the 1970s. The priority there was providing more food not the unfortunate impact of subsidies in exacerbating domestic inefficiencies and inequities. Nor was the FAO then worried about cross-border spillovers reflected in distortions to world markets and market access barriers for efficient suppliers. And developing countries did not welcome the early Josling results that showed that a lot of them were taxing the agriculture sector to the benefit of consumers while publicly saying that they needed to produce more food.[4]

By 1980, countries were facing the disruptive consequences of food surpluses for prices and subsidies.[5] That year the OECD Committee for Agriculture at Ministerial level discussed how "to improve both access to markets

[3] (Josling and Valdés, 2004; on the development of the PSE/CSE, see also Cahill and Legg, 1990; Scandizzo, 1989). On Josling's role, see also (Legg, 2019). For an excellent survey of the background and evolution of the PSE, including a discussion of the complexities of defining and measuring support see (Legg, 2003).

[4] Nevertheless, regular reports on the process of international agricultural adjustment were given to governments at FAO Conferences in 1977, 1979, 1981, 1983 and 1985. In each of these reports the PSE and CSE estimates were presented as evidence of the evolution of agricultural policies (Legg and Blandford, 2019).

[5] For a description of the qualitative and quantitative indicators of the crisis in food trade in this period, see (Wolfe, 1998, 63 ff).

and security of supply and to avoid trade practices that lead to market distortions." The 1980 OECD Council at Ministerial level (mostly finance with some trade and foreign ministers) endorsed the request for a study and in 1981 noted a progress report on it. The eventual report (OECD, 1982) provided a comprehensive analysis of the problems and briefly discusses the concept of net assistance or "effective rate of assistance" with reference to work by the Australian Industries Assistance Commission. That concept is closely related to a PSE (Anderson, 2003), but the idea was not pursued in the report. The more important point made by the report was the link between domestic agricultural and trade policies. At the 1982 meeting of the OECD Council at Ministerial level ministers endorsed this conclusion and agreed that agricultural trade should be more fully integrated within the trading system. The Council mandated further study of a "multilateral approach aimed at achieving a gradual reduction in protection and a liberalisation of trade, in which a balance should be maintained as between countries and commodities."

Ministers kept the pressure on at the 1986 meeting of the Council, which preceded the launch of the Uruguay Round later that year, finance ministers observed that "Policies of domestic support for and protection of agriculture have sometimes inhibited needed adjustment and led to increases in global supplies in excess of demand." They conclused that "it is urgent that OECD countries… make strenuous efforts to reorient policies which have an effect on agriculture in order to encourage structural adjustment, to bring down budget expenditures, to correct market imbalances and to reduce tensions internationally."

The culmination of these years of study and growing political consensus came at the 1987 meeting of the Council. In a lengthy section of the Communiqué, finance ministers approved the joint report of the Trade and Agriculture Committees (OECD, 1987) and observed that "Boosted by policies which have prevented an adequate transmission of market signals to farmers, supply substantially exceeds effective demand. The cost of agricultural policies is considerable, for government budgets, for consumers and for the economy as a whole." Ministers then outlined a number of reform principles and committed to vigorous participation in the Uruguay Round. They concluded by committing that "The OECD will continue to contribute … by monitoring the implementation of the various actions and principles listed above."

The main message of the 1987 report was that national policies and agricultural trade have to be considered together, and they were in the sophisticated model developed in response to the 1982 mandate. The PSE was a key component of the model, but it is an accounting device not the trade model itself. Prior to the development of the PSE the OECD lacked a method to compare its members' agricultural policies. The process of calculating PSEs showed the influence of domestic policy reform on trade liberalisation, and vice versa (Legg, 2003, 193).

Eventually, if initially with great reluctance, all OECD countries agreed to be subject to the calculation of PSEs for their agricultural sectors, but no country wanted to be first. Canada and Australia were the first to agree.[6] Others were reluctant to participate, and finding the data was like getting blood from a stone, because governments knew the analysis would expose subsidies hidden from the public who were only familiar with budget elements, not the consumer tax element of MPS, the biggest part of support to agriculture.[7] It took time for countries to be convinced that it was a valid and credible exercise and that they would all benefit from reducing their trade distorting subsidies.

OECD Secretariat officials recall that they did painstaking work, placing the onus on countries that did not like the methodology to refute the results. While the Uruguay Round negotiations did not focus on the PSE, but on things it made visible, OECD countries did look ahead to how domestic support measures would be captured in the

[6] These two countries might have been willing to be guinea pigs because they knew what to expect as a result of the earlier work of the Australian Industries Commission on the effective rate of assistance (see above) and Josling's application of the method to Canada (Josling, 1981), although Canada later became more defensive when the results showed the extent of dairy support.

[7] Annex II of (OECD, 1987) is the main statement of how the initial PSE and CSE were calculated.

agreement.[8] In the event, PSEs were calculated for all OECD countries in 1987 (OECD, 1987, see Table 2 p. 117) with national studies published that year on the major traders (Australia, Canada, the EEC, Japan and the United States) as well as Austria and New Zealand. Detailed country studies for the rest of the members came later—Finland (1989), Iceland (1995), Norway (1990), Sweden (1988), Switzerland (1990) and Turkey (1994).

The 1987 ministerial mandate started the OECD monitoring reports, and the ongoing development of a valuable database. The OECD is still monitoring agriculture support more than three decades later and doing it on a consistent basis with an ever-increasing list of participating countries.

The Secretariat had a powerful wind behind them from an important country. Getting the OECD involved took sustained pressure from finance ministers generally, but especially the United States, supported by the leading exporters in the Cairns Group. The U.S. was determined to get agriculture into the GATT. They wanted evidence. The Secretariat could never have done it without a champion.

Without the evident need to being agriculture properly within the GATT due to the farm wars of the 1980s (Wolfe, 1998), there would have been no pressure for the OECD analytic work. Since the negotiations took place elsewhere, the respected OECD was allowed to document agricultural policies and create a metric to compare countries. The results were used as a socialization device to educate politicians and voters (recall the headlines citing enormous annual subsidies to farmers) while explaining how things like decoupled income support could accomplish the goals of farm policy more effectively and efficiently. That work both helped show the necessity for the Uruguay Round to include agriculture and provided ideas on how to do it. The index helped countries to see their policies in comparative perspective, but it was not in itself a basis for multilateral trade negotiations.

3 How the Uruguay Round negotiators used the PSE

The landmark 1987 OECD study allowed an old economic insight to form the basis for a new political consensus with the acknowledgment by finance ministers that the roots of difficulties in agricultural trade are in domestic policies. The work of the OECD showed why liberalization, if confined to individual farm sectors, would be too narrow to ensure both that there would be enough in a deal for all participants, and that the spillovers could be internalized. In farming, one market (e.g. beef) can be a buffer for another (e.g. grain) while efforts to reduce production in one area (e.g. dairy, by subsidized slaughtering) can reduce prices in another (e.g. beef). The Uruguay Round negotiation framework would need to be comprehensive and it would need to encompass domestic agricultural policies in all the leading exporters and importers. The PSE helped illuminate the policies that had to be addressed, as shown in Figure 1 above.

The PSE as such was not used in the WTO Agreement on Agriculture (AoA). Understanding why not helps in thinking about whether the approach can be useful now. The PSE is a measure of monetary transfers not trade distortion. It is sensitive to changes in world prices, in exchange rates, and in the policy instruments used in large countries. Governments cannot be expected to make commitments on things outside their control. The PSE is useful if the objective is the reform of *agricultural policy* not the reform of *trade policy*—it measures monetary transfers that may distort national resource allocation without necessarily distorting international trade. The PSE helped states grasp the extent of the problems, and the models helped show the implications of liberalization, but the PSE had to be decomposed for negotiating purposes.

The Uruguay Round negotiating framework divided agricultural policies in four:

1. measures affecting market access,
2. subsidies affecting export competition.

[8] In the WTO Agreement on Agriculture all measures that provide domestic support for farmers (Articles 6 and 7) are subject to limits in principle, but support under some policies is exempt from limit. When the contours of the Uruguay Round had become clearer, the battles over classification in the PSE system began because countries saw the linkages to the agreement.

3. policies providing domestic support, and
4. policies that do not distort either trade or production.

First, the solution to the *market access* problem was to move everything possible to the border. Measures affected by this "tariffication" were all picked up in the section of the PSE in Figure 1 called "Market Price Support" (MPS); they are trade-related either because they tend to deny foreign producers the benefits of a high domestic price or because domestic consumers are deprived of the benefits of lower prices. Such measures included the U.S. Section 22 waiver, the EU variable levies, the Japanese and Korean rice import bans, and the import quotas imposed in Canada in support of domestic supply management systems. Second, *export subsidies* are also picked up in MPS.

Most of the remaining elements of the PSE would be classified as *domestic support* measures, the third element of the framework, where the problem of commensurability of support across countries and commodities was most severe. The solution to this puzzle was the creation of the Aggregate Measurement of Support *(*AMS) that provides the basis for the domestic support reduction commitment in the AoA. The AMS was influenced by work on the PSE, but the measures are quite different. The PSE is defined by all transfers, while the AMS includes some policies and excludes others.[9] Negotiators needed a fixed reference point rather than something that constantly fluctuates with world prices. The PSE is an economist's tool; a trade agreement is a legal tool.

A major feature of the commitments on domestic support is that subsidies in the whole agricultural sector are subject in principle to reduction, which led to the intricate and lengthy negotiations on what was to be excluded, the fourth element of the framework. Some policies captured in the PSE calculation (Figure 1) would be exempt because they encourage agricultural and rural development in developing countries (Article 6.2 of the AoA), or because they are in the so-called Green Box (Annex 2) that contains policies that "have no, or at most minimal, trade distortion effects or effects on production" notably direct "decoupled" payments to producers for such things as structural adjustment or regional assistance. Such direct support must not involve either price support or implicit support from consumers (Legg, 1991; OECD, 1990).

The decoupling idea had been common among practitioners for a long time (Johnson, 1991, 322-3). Governments can legitimately create new policy measures aimed at the welfare of farmers, so long as their costs are not born by other countries. (Magiera, et al., 1990) Such new measures would be picked up by the PSE, however—another reason why it could not form the basis for negotiations. In Canada, for example, the February 1995 Budget eliminated payments under the Western Grain Transportation Act, supposedly in the interests of deficit reduction but in fact as part of the AoA export subsidy reduction commitment. In compensation for the effect on farm asset values, prairie landowners received a direct payment. The initial cost of the direct payment was higher than the cost of the transport subsidy, so the PSE went up, but the new payment was in the Green Box and therefore exempt from the AMS reduction commitment.

In sum, the PSE helped countries understand the dimensions of the problem, and that everyone was implicated, but the negotiations were a separate process. The fact that OECD PSEs had been calculated made it easier for government officials to make sense of different measurements of support in their own countries, and then transparency underpinned the negotiations.

[9] (Tangermann, 1994, 25; Josling, et al., 1990, 451) For a technical discussion of the concept, see also (Ballenger, 1989). On why the PSE could not be used, see the text comments and the annex graphs of the difference between the AMS and the PSE in (OECD, 1995). For a detailed analysis of why the PSE was not used for the negotiations, in part because it is not an adequate measure of trade distortion caused by governmental agricultural policies, and of how negotiators arrived at the AMS, see (Silvis and Van Der Hamsvoort, 1996). On the analytic and technical issues with the PSE and the AMS, see also (Brink, 2018).

4 Attempts to use the PSE concepts in other commodity sectors

The power of the PSE makes it an attractive tool for attempts to illuminate subsidies in other sectors, notably fisheries, biofuels and fossil fuel subsidies, where it has been influential for work in other international organizations, even if it has had less impact than the work on agriculture. I have no space for a full history of these efforts, but I do want to highlight how here too the problems were conceptual and political. I consider fossil fuel subsidies, the MPS problem, and tax expenditures.

When the G20 Leaders promised in September 2009 to "phase out over the medium term inefficient fossil fuel subsidies that contribute to wasteful consumption," the only internationally available estimates of fossil fuel subsidies at hand were the International Energy Agency's (IEA) estimates of consumer price support (i.e. underpricing of fuels and fossil-derived electricity). But this metric did not include key countries, which invited accusations of unfairness, and the IEA Governing Board comprised of ministers of energy or foreign affairs had shown itself over the years to be reluctant to shine a light on their own countries' fossil fuel subsidies.

The OECD Secretariat, which had the expertise (individuals matter), volunteered to produce an inventory of support provided to fossil fuels by OECD countries, and OECD members were supportive. The work built on an earlier PSE-consistent method used to estimate government support to coal production (International Energy Agency, 1988), itself instigated by Australian irritation when the first draft of a report on Coal Prospects and Policies did not mention subsidies. The new inventory (OECD, 2011) applied the principles of the PSE and CSE, except that it left the estimation of consumer price support to the IEA to avoid duplication of effort. The database[10] now covers all of the G20 (apart from Saudi Arabia). The OECD Inventory is also the framework used by the UN Environment Programme when it was looking for an agreed definition and set of methods to estimate individual fossil fuel subsidy elements for SDG Indicator 12.c.1 (UNEP, et al., 2019).

Next MPS, which is always a problem—Members were initially reluctant to measure it in agriculture. Critics argued that the Secretariat is not measuring the same thing at the correct point at the border, or that it does not show the price gap facing any producer. It offers a snapshot of world prices at the border averaged over a year, and domestic prices of the same commodity over the year, without showing any dynamic effects if the transfer was removed. In the case of the U.S. grain sector, the initial PSE was based on budgetary expenditure alone since the U.S. domestic price was effectively the world price (OECD, 1987, 109-10). A similar issue arises when discussing what would happen if subsidized consumption of petroleum products in Saudi Arabia were to end, and a part of those fuels were to be diverted to the international market.

When the IEA began calculating a PSE for coal in the late 1980s, the inclusion of MPS was resisted by members who found many ingenious arguments for why a reference price could not be calculated (Steenblik, 1998). The same problem arose in measuring fisheries subsidies. The work on fisheries support began not at the request of ministers but by the OECD Secretariat adding data on subsidies to the annual Review of Fisheries. The Fisheries Committee proved supportive of the PSE approach, in no small part because everybody was implicated at the same time, and no country was singled out. An assessment of the feasibility of an MPS measure concluded, however, that the technical problems were too great due to the the heterogeneous nature of the fisheries commodity market and the consequent difficulty in establishing a world reference price from which price gaps can be measured (OECD, 2017). Of course, there are different presentations for fish (fresh, chilled, frozen, canned, whether boned or not), but similar differentiation is common in agriculture. Still, countries were insistent on leaving out MPS in calculating the fisheries index, so the OECD called its estimates "government financial transfers" and later the "fisheries support estimate", or FSE.[11]

[10] https://www.oecd.org/fossil-fuels/data/

[11] Fisheries support is defined as the financial transfers from governments to the fisheries. The support consists of direct revenue enhancing transfers (direct payments), transfers that reduce the operating costs, and the costs of general services provided to the fishing industry.

Another problem for PSEs in other sectors is tax expenditures. The value of exemptions from or reductions in excise taxes on fuel have always been controversial because almost all countries exempt off-road uses of diesel from excise taxes. The impact for any given quantity of consumption is large in high-tax economies, such as Finland and Sweden, and low in countries like Canada and the United States. A few member countries have blocked the inclusion of fuel subsidies in the calculation of fisheries subsidies at the OECD, as they had for a time in the agricultural PSE, and whether or not to discipline them remains an obstacle in WTO fisheries negotiations.

5 Does the OECD approach work for industrial subsidies?

State support remains a leading cause of tension in international commercial relations. The problems caused by subsidies for agriculture, fisheries and energy have not gone away, but the biggest source of tension is industrial subsidies. Of the many reasons for that tension, a key one is transparency: governments can see distortions that look like they were caused by subsidies offered by other countries, but they lack the data to illuminate that state support. Providing such data was one of the motivations for the original work in agriculture. Could a new index be created? The OECD method has been extended to show where and in what form industrial subsidies are provided in two sectors, aluminium (OECD, 2019b) and semiconductors (OECD, 2019d).[12] The matrix used in the new studies is shown in Figure 4. The matrix is not explicitly used in work on excess capacity in steel, but the ideas can be seen there.

When the OECD extended the framework to fossil fuel subsidies, one part of the work was the creation of a matrix showing how common types of support measures would be classified along two dimensions (OECD, 2011, Figure 1.). The vertical axis is the transfer mechanism, or how a transfer is created, based on Article 1 of the WTO Agreement on Subsidies and Countervailing Measures (ASCM); and the horizontal axis is statutory or formal incidence—to whom and what a transfer is first given. For example, where the row labelled “tax revenue forgone” intersects the column “knowledge” we find “tax credit for private R&D.” The taxonomy of subsidies represented by this matrix is comprehensive, and generic, allowing it to be used for any sector.

OECD (2019), Fisheries support (indicator). doi: 10.1787/1ff7e544-en (Accessed on 18 September 2019). For a different approach to measuring fish subsidies, noting the impact of choices about definitions, see (Sumaila, et al., 2016; Sumaila, 2018).

[12] For an accessible explanation of the challenge of measuring subsidies in the aluminium value chain listen to Trade Talks episode 112: Forensic Subsidies Detectives and Trade Disputes, a conversation with Ken Ash of the OECD at https://www.tradetalkspodcast.com/podcast/112-forensic-subsidies-detectives-and-trade-disputes/

Figure 4 Indicative matrix of support measures, with illustrative examples

		Statutory or formal incidence (to whom and what a transfer is first given)							
		Production							Consumption
		Costs of value-adding factors							
		A: Output returns	B: Enterprise income	C: Cost of intermediate inputs	D: Labour	E: Land and natural resources	F: Capital	G: Knowledge	H: Direct support to consumers
Transfer Mechanism (how a transfer is created)	1: Direct transfer of funds	Output bounty or deficiency payment	Operating grant	Input-price subsidy	Wage subsidy	Capital grant linked to acquisition of land	Grant tied to the acquisition of assets, including foreign ones	Government R&D	Unit subsidy
	2: Tax revenue foregone	Production tax credit	Reduced rate of income tax	Reduction in excise tax on input	Reduction in social charges (payroll taxes)	Property-tax reduction or exemption	Investment tax credit	Tax credit for private R&D	VAT or excise-tax concession
	3: Other government revenue foregone		Waiving of administrative fees or charges	Under-pricing of a government good or service		Under-pricing of access to government land or natural resources	Debt forgiveness or restructuring	Government transfer of intellectual property rights	Under-pricing of access to a natural resource harvested by final consumer
	4: Transfer of risk to government	Government buffer stock	Third-party liability limit for producers		Assumption of occupational health and accident liabilities	Credit guarantee linked to acquisition of land	Loan guarantee; non-market-based debt-equity conversion		Price-triggered subsidy
	5: Induced transfers	Import tariff or export subsidy; local-content requirements; discriminatory GP	Monopoly concession	Monopsony concession; export restriction dual pricing	Wage control	Land-use control	Credit control (sector-specific); non-market mergers and acquisitions	Deviations from standard IPR rules	Regulated price; cross subsidy
	-- *Including advantages conferred through state enterprises*						Below-market loan, including by state-owned bank		

Note: This matrix is a work in progress and may be refined in the future. Some measures may fall under a number of categories (e.g. debt-equity conversions may involve elements of both risk transfers and revenue foregone). GP = Government procurement. Adapted from OECD (2018[89]).

Source (OECD, 2019b, Table 1.2)

This taxonomy will suggest different places to look for subsidies, depending on the sector. The cells in the matrix can be populated with data from many sources. Given the reluctance of governments, the Secretariat had to be

creative, trying to estimate the value of what firms receive as much as what governments provide, not least because some of the most important providers of state support are not members of the OECD.

The aluminium report uses an unusual set of data, including satellite-based capacity estimates and stock exchange filings in addition to government data in order to estimate support provided at every stage of the multi-country value chain. Rather than look at macro level aggregate data, which would allow comparison to other sectors and other countries, the report looks at just 17 firms, which captures a large share of global production and trade. The semiconductor study is also a firm-level analysis without country-level aggregation given the challenge of tracking support and its potential trade impacts up and down the value chain. The reports do not try to measure MPS, for familiar reasons: many of the firms are based in China, a market that is so big that there is said to be no way to tell if actions there depress the world price.

In both the aluminium and semiconductor studies the matrix in Figure 4 is largely the one developed in 2011 to capture support provided by governments, but the last row, induced transfers, adds a second line to include "advantages conferred through state enterprises." That line of course is not derived from the ASCM, unlike the rest of the rows. That line is also the only part of the matrix that refers to firm ownership and control, which is in fact a key concern of the reports. The other big concern, also not well reflected in the ASCM, is the various forms of support provided through the financial system. While hard to estimate, things like below market debt and equity are prevalent (OECD, 2019c, 4). The two studies are a valuable attempt to build a database, but they required an almost forensic level of research on firms, and gaps remain. More transparency from governments is needed (OECD, 2019b, 107). And whether the WTO, whose rules apply to governments not firms, can devise rules to discipline below market finance let alone SOEs that receive such finance is an open question.

The OECD also has long experience with steel. Overcapacity in the Chinese steel industry has been a U.S. concern for many years both in bilateral discussions and in multilateral fora, notably in an attempt to create a forum under the auspices of the OECD Steel Committee in 2016. The host of the 2016 G20 summit wanting a successful outcome agreed to language in the Leaders' communiqué that recognized a global problem without naming any country. The Hangzhou communiqué called for the creation of a Global Forum on Excess Steel Capacity to increase information sharing and cooperation, with OECD as facilitator. The Global Forum, created later that year with a three year work program, brought together 33 member economies (all G20 members and interested OECD members), representing around 90% of global steel production and capacity. Its reports take a comprehensive approach to the global steel industry with information on crude steel capacity developments and government policies affecting excess capacity, including market-distorting subsidies and other government support measures. The Forum also generated detailed recommendations, which is where the ideas of the OECD matrix are reflected. Members were asked in a questionnaire to report developments under those headings and the review process allowed countries to ask each other searching questions about the information that they had provided (G20, 2018).

The Global Forum reports[13] could provide some basis for analysis but OECD staff functioned only as a secretariat to the Forum—they could only use information provided by Members and were not allowed to undertake any assessment. The reports only deal with policies that lead to "excess capacity" which is not the same as the economic effects of all steel-related policy let alone trade impact. The complete information is not public, so the greater transparency the Forum achieved is only internal to participating governments. China perceived that the Forum had become a tool to pressure and attack it, so withdrew. The Forum continues and over time might lead to consensual understanding on good and bad subsidies in this area, but that is not the same as creating an index that would allow countries, their industries and their citizens to see that they are all implicated in the problem of too much steel supply chasing too little demand.

[13] The 2018 report is cited here; the 2019 report exists only as a draft because one member (known to be China) denied consensus for its adoption.

Could the OECD go further using its matrix to develop a new index? Developing the PSE in the 1980s left many members exposed, so how did the OECD get away with it?

1. Many conceptual and methodological ideas were available in the agricultural economics and trade literatures, including from Max Corden, that Corden's student Tim Josling built on, and that were then ready to be taken up by the OECD.
2. Because of that work on the inter-related nature of agricultural policies, making them commensurable was an idea whose time had come. A lot of the earlier debate was that trade policy was one thing, agricultural policy another. But the PSE showed that the two are integrated.
3. Countries knew they had a two-fold problem: a) the excessive domestic cost of agricultural policies (inefficiency), and b) world market spillovers associated with the need to dump excess output and the effects of that on world prices and third country producers. The OECD helped them see that they were all responsible, that government support mechanisms do not merely affect other countries, but they affect consumers too, and that the benefit for any country from the reform of agricultural subsidies was greatest when all subsidizing countries collectively reformed.
4. The OECD was valuable because it was not in competition with the GATT—the Uruguay Round was the forum for negotiations, but the OECD could help with analysis and presenting the case for reform, and all the countries where reform was most needed were members.
5. The focus was mostly on commodities traded on world markets with relatively low degrees of product differentiation for which the production function is relatively simple.

These factors are largely replicated in subsequent OECD use of the PSE framework. Having done it once it was easier for the OECD to do it again for coal, fossil fuel subsidies, and fisheries, although similar resistance points emerged, and it proved possible to adapt the method to non-OECD countries when data was available, especially when some of the major emerging economies decided to cooperate with the OECD. But those factors are not so easily replicated for aluminium and semiconductors, for a number of reasons:

1. These are concentrated industries dominated by large firms in a few countries.
2. Understanding a multi-country supply chain is crucial, and government support is as likely to be offered by regional or local governments, but transparency is especially complex in federal states.
3. The price gap approach underlying the concept of MPS is harder to use (if not impossible) when prices are difficult to observe inside a value chain, or when a country is so large that the world price is far from independent of its domestic prices.
4. The Secretariat has had to develop new tools for understanding tax expenditures and support through the financial system.
5. A focus on firms not countries precludes the creation of a PSE-type index and makes it more difficult for governments to see themselves in comparison to others, as in Figure 2 above.
6. Some of the principal providers of support are not members of the OECD, and governments have not been forthcoming with data.

In sum, recent studies show that the OECD method has promise in illuminating industrial subsidies, although as with the PSE, decomposition may be needed for WTO negotiations. As for steel, the country with the world's largest capacity, China, is not an OECD member and lacks confidence even in the information sharing process under the Global Forum, so they are far from agreeing to the level of cooperation that would be needed.

6 Conclusion: what lessons can we draw from the PSE example?

The motivation for this paper was a question about whether an index like the PSE would help governments to make progress on reform of industrial subsidies when WTO data are inadequate, and countries are sure that other governments' subsidies are larger than their own. The answer begins with two caveats.

First, the tool is no magic bullet that can resolve the well-known transparency problems with subsidies (Collins-Williams and Wolfe, 2010). Countries still have to agree on the method and provide the data. Governments might

be more willing to provide data to a forum like the OECD, where they would feel less at risk of the results being used in a WTO dispute, but there are few new sources of information. The work on aluminium and semi-conductors drew on (published) data from the producers themselves, and novel sources like satellite imagery. Data from NGOs and academics can be used to goad governments into providing more information, but the OECD gets its budgetary data from public sources, which generally means from published government documents. (The price data on which price-gap calculations are made come from other sources.) If governments do not supply it, or publish it, the OECD does not have it. If governments are unwilling to be transparent about their subsidies, a PSE-type measure will be limited.

The second caveat is that the PSE is an accounting exercise that cannot explain anything about spillovers between sectors, nor is it an unambiguous indicator of trade distortion. Providing that kind of information requires model-based analysis that can rank different forms of support in terms of their relative trade-distortions. This has, in fact, been done and is ongoing in work in the OECD, not only with respect to trade distortions but also to evaluate environmental and farm income impacts.

A different answer to whether it would be useful starts with asking, Has the creation of the PSE and three decades of monitoring reports made a difference? One measure is simply the evolution of the PSE itself. Figure 2 above shows a decline in agricultural support since the creation of the WTO in 1995, but that is a measure of transfers not trade distortion. The PSE is good for a) assessing domestic policy change through time; and, b) cross-national comparison. It is certainly possible that ongoing implementation of the AoA commitments has led to a reduction in support, though the PSE is a different measure than things on which Members made commitments in the AoA and that they monitor in the WTO. Is the causal factor the text of the agreement (recording a consensus among governments), or the increased transparency due to OECD monitoring, which is sometimes the sources of questions in the WTO agriculture committee when it reviews the implementation of commitments? If the OECD monitoring has made a difference, then further efforts to increase transparency in other sectors might also make a difference even if new WTO agreements remain out of reach.

Going further with the current approach may need a stronger political impetus. Finance ministers wanted the work done to identify and quantify agricultural support in the early 1980s and said so repeatedly in the annual meetings of the OECD Council. Is there still that level of interest? Despite the fact that the OECD monitoring reports show that subsidies are still high, in early 2020 Members of the WTO were still struggling to find a way forward on inter alia further reducing domestic support and improving transparency as part of a package for the 12th WTO ministerial to be held in 2021. The negotiations are dominated by representatives of agriculture ministers more than trade ministers, and they have not been pushed by finance ministers at OECD in decades. (If the high interest rates of the early 1980s magnified the desire of finance ministers to reduce farm support, that source of pressure is not now present.) The G20 meetings also have not given any impetus to work on farm subsidies.

The OECD has had a wind in its sails on the aluminium and semiconductor studies from the EU, Japan and the United States, but so far, the OECD Council has not offered the same impetus as it did on agriculture a generation ago. And neither has the G20 where only some members see the value of discussing subsidies in a forum that does not face the pressure of negotiations or dispute settlement. It would be helpful if both OECD and G20 ministers asked the Secretariat in cooperation with other international organizations to deepen its development of measures to compare subsidies across countries, but the Global Forum experience is discouraging. That might depend on the emergence of a shared sense of crisis among all the major traders. What we saw in the 1980s with respect to agriculture does not seem to have emerged for aluminium or semiconductors, and sectoral ministers may be no more likely now to insist on increased transparency than turkeys are likely to demand a place at the Christmas table.

Does the experience with agriculture suggest that the PSE approach would help with possible WTO negotiations on industrial subsidies? The complexity of global value chains is part of why the OECD matrix was applied to firms but not countries in the aluminium and semiconductor studies, but WTO agreements focus on countries not firms, and they struggle to discipline the sub-national governments implicated in the support to these industries.

GATT rules on dumping and countervailing duties fit with the trade theories of the 1980s, where analysis of an industry could be based on the “representative firm” hypothesis. WTO agreements allow trade remedy investigations based on a sample of a country’s firms to result in tariffs that would be applied on imports of all firms in that country. That makes no sense in a global value chain world (Mavroidis and Sapir, 2008; Ciuriak, et al., 2015). More important in this context, we do not yet know how to construct country-level disciplines on the basis of subsidies revealed by firm-level analysis.

When there is uncertainty about what counts as a subsidy, formal notifications may not be the best way to enhance understanding of policies that might be affecting the health of the trading system. Disciplines on subsidies begin with information (Shaffer, et al., 2015), and this public good is under-supplied. Countries need to understand the incidence of subsidies before they can analyse the potential trade distortions, let alone the need for new rules defined by policies that look like they are harmful, often because they are designed on different state principles. As Hoekman and Nelson (2020) suggest, it might make more sense to start from an analysis of the negative economic spillovers of policy rather than with theological analysis of whether certain policies should be prohibited per se.

Countries always want to believe that somebody else’s subsidies are bigger than their own: this is not a competition that anybody wants to be seen to be winning. But by not creating robust comparisons of industrial subsidies, everybody is losing.

References

Anderson, Kym, (2003) 'Measuring Effects of Trade Policy Distortions: How Far Have We Come?,' The World Economy 26:4 (Apr 2003), 413.

Ballenger, Nicole, et al, (1989) 'Potential Use of an Aggregate Measure of Support,' International Agricultural Trade Research Consortium, Commissioned Paper Number 5, 1989?

Brink, Lars, (2018) 'Farm Support, Domestic Policies, and the WTO Rules: The World Is Changing,' in Meilke, Karl and Tim Josling, eds, Handbook of International Food and Agricultural Policies Volume III: International Trade Rules for Food and Agricultural Products (Singapore: World Scientific Publishing), 245-77.

Cahill, Carmel and Wilfrid Legg, (1990) 'Estimation of Agricultural Assistance Using Producer and Consumer Subsidy Equivalents: Theory and Practice,' Modelling the Effects of Agricultural Policies OECD Economic Studies No.13/Winter1989-1990 (Paris: Organisation for Economic Co-operation and Development), 13-43.

Ciuriak, Dan, Beverly Lapham, Robert Wolfe, Terry Collins-Williams and John Curtis, (2015) 'Firms in International Trade: Trade Policy Implications of the New New Trade Theory,' Global Policy 6:2 (May 2015), 130-40.

Collins-Williams, Terry and Robert Wolfe, (2010) 'Transparency as a Trade Policy Tool: The Wto's Cloudy Windows,' World Trade Review 9:4 (November 2010), 551–81.

Corden, W. M., (1971) The Theory of Protection (Oxford: Clarendon Press).

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.

FAO, (1973) 'Agricultural Protection: Domestic Policy and International Trade,' Food and Agriculture Organisation of the United Nations, C 73/LIM 9, November 1973.

FAO, (1975) 'Agricultural Protection and Stabilization Policies: A Framework of Measurement in the Context of Agricultural Adjustment,' Food and Agriculture Organisation of the United Nations, C 75/LIM 2, October 1975.

GATT, (1958) Trends in International Trade: Report by a Panel of Experts (Geneva: The Contracting Parties to the General Agreement on Tariffs and Trade).

G20. (2018). G20 Global Forum on Steel Excess Capacity, Ministerial Report, 20 September 2018.

Hoekman, Bernard and Douglas Nelson, (2020a) 'Subsidies, Spillovers and Multilateral Cooperation,' Bertelsmann Stiftung, Working Paper in process.

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

International Energy Agency, (1988) Coal Prospects and Policies in Iea Countries (Paris: OECD Publications).

Johnson, D. Gale, (1991) World Agriculture in Disarray Second Edition (London: Macmillan for the Trade Policy Research Centre).

Josling, Tim, (1981) Intervention and Regulation in Canadian Agriculture: A Comparison of Costs and Benefits among Sectors Technical Report no. E/I4 (Ottawa: Economic Council of Canada and Institute for Research on Public Policy).

Josling, Tim and Klaus Mittenzwei, (2013) 'Transparency and Timeliness: The Monitoring of Agricultural Policies in the WTO Using OECD Data,' World Trade Review 12:03 533-47.

Josling, Timothy E., Fred H. Sanderson and T.K. Warley, (1990) 'The Future of International Agricultural Relations: Issues in the GATT Negotiations,' in Sanderson, Fred H., ed. Agricultural Protectionism in the Industrialized World (Baltimore: Johns Hopkins University Press for Resources for the Future, Washington, DC), 433-64.

Josling, Timothy E. and Alberto Valdés, (2004) 'Agricultural Policy Indicators,' FAO, ESA Working Paper No. 04-04, January 2004.

Legg, Wilfrid, (1991) 'Direct Income Support,' OECD Observer 168 (February-March 1991), 31-3.

Legg, Wilfrid, (2003) 'Presidential Address Agricultural Subsidies: Measurement and Use in Policy Evaluation,' Journal of Agricultural Economics 54:2 (July 2003), 175-201.

Legg, Wilfrid, (2019) 'Tim Josling's Legacy – the Gold Standard to Measure Agricultural Support,' EuroChoices 18:2 47-8.

Legg, Wilfrid and David Blandford, (2019) 'Chapter 16: The Role of International Organizations in Agricultural Policy Analysis,' in Blandford, David and Katharine A. Hassapoyannes, eds, Global Challenges for Future Food and Agricultural Policies World Scientific Publishing),

Mavroidis, Petros C. and Andr Sapir, (2008) 'Mexico--Antidumping Measures on Rice,' World Trade Review 7:01 (2008), 305-23.

OECD, (1982) 'Study on Problems of Agricultural Trade,' Organisation for Economic Co-operation and Development, Note by the Secretariat AGR(82)4 TC(82)3, February 26, 1982.

OECD, (1987) National Policies and Agricultural Trade (Paris: Organisation for Economic Co-operation and Development).

OECD, (1990) Reforming Agricultural Policies: Quantitative Restrictions on Production; Direct Income Support (Paris: Organisation for Economic Co-operation and Development).

OECD, (1991) Agricultural Policies, Markets and Trade: Monitoring and Outlook 1991 (Paris: Organisation for Economic Co-operation and Development).

OECD, (1995) Technological Change and Structural Adjustment in OECD Agriculture (Paris: Organisation for Economic Co-operation and Development).

OECD, (2011) Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels (Paris: Organisation for Economic Co-operation and Development).

OECD, (2016) 'Oecd's Producer Support Estimate and Related Indicators of Agricultural Support: Concepts, Calculation, Interpretation and Use (the PSE Manual),' OECD Trade and Agriculture Directorate, http://www.oecd.org/agriculture/topics/agricultural-policy-monitoring-and-evaluation/documents/producer-support-estimates-manual.pdf,

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

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

OECD, (2019b) 'Measuring Distortions in International Markets: The Aluminium Value Chain,' OECD Trade Policy Papers, No. 218,

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

OECD, (2019d) 'Levelling the Playing Field: Measuring and Addressing Trade-Distorting Government Support,' OECD Global Forum on Trade, TAD/TC/GF/M(2019)1, 18 November 2019.

Ostry, Sylvia, (1987) Interdependence: Vulnerability and Opportunity (Washington, D.C.: The Per Jacobsson Foundation).

Scandizzo, Pasquale Lucio, (1989) Measures of Protection: Methodology, Economic Interpretation and Policy Relevance FAO Economic and Social Development Paper 84 (Rome: Food and Agriculture Organization of the United Nations).

Shaffer, Gregory, Robert Wolfe and Vinhcent Le, (2015) 'Can Informal Law Discipline Subsidies?,' Journal of International Economic Law 18:4 (December 2015), 711-41.

Silvis, H. J. and C. P. C. M. Van Der Hamsvoort, (1996) 'The AMS in Agricultural Trade Negotiations: A Review,' Food Policy 21:6 (1996/12/01/), 527-39.

Steenblik, Ronald P., (1998) 'Previous Multilateral Efforts to Discipline Subsidies to Natural Resource Based Industries,' Paper prepared for the Workshop on the Impact of Government Financial Transfers on Fisheries Management, Resource Sustainability, and International Trade, Manila, Philippines, 17-19 August 1998.

Sumaila, U. Rashid, Vicky Lam, Frédéric Le Manach, Wilf Swartz and Daniel Pauly, (2016) 'Global Fisheries Subsidies: An Updated Estimate,' Marine Policy 69: (2016/07/01/), 189-93.

Sumaila, U. Rashid, (2018) 'Small-Scale Fisheries and Subsidies Disciplines: Definitions, Catches, Revenues, and Subsidies,' in ICTSD, ed. Fisheries Subsidies Rules at the WTO: A Compilation of Evidence and Analysis (Geneva: International Centre for Trade and Sustainable Development), 109-20.

Tangermann, Stefan, (1994) 'An Assessment of the Agreement on Agriculture,' New World Trading System: Readings (Paris: Organisation for Economic Co-Operation and Development), 143-51.

UNEP, OECD and IISD, (2019) 'Measuring Fossil Fuel Subsidies in the Context of the Sustainable Development Goals,' UN Environment, 2019.

Warley, T.K., (1976) 'Western Trade in Agricultural Products,' in Shonfield, Andrew, ed. International Economic Relations of the Western World, 1959-1971; Volume 1: Politics and Trade (London: Oxford University Press for the Royal Institute of International Affairs),

Wolfe, Robert, (1998) Farm Wars: The Political Economy of Agriculture and the International Trade Regime (London and New York: Macmillan and St. Martin's Press).

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

Wolfe, Robert, (2018) 'Is World Trade Organization Information Good Enough? How a Systematic Reflection by Members on Transparency Could Promote Institutional Learning,' Bertelsmann Stiftung, July 2018.

Wolfe, Robert, (2020) 'Informal Learning and WTO Renewal: Using Thematic Sessions to Create More Opportunities for Dialogue,' Bertelsmann Stiftung, Policy Brief in process.

WTO, (2019) 'Overview of Developments in the International Trading Environment: Annual Report by the Director-General (Mid-October 2018to Mid-October 2019,' World Trade Organization, WT/TPR/OV/22, 29 November 2019.

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