WORKING PAPER 01
APRIL 2020

Institute for International Trade

INDUSTRIAL SUBSIDIES, MARKET COMPETITION, GLOBAL TRADE AND INVESTMENT: TOWARDS A RESEARCH AGENDA

Abstract

Subsidization by states of their domestic industries to gain competitive advantage abroad is a perennial topic in international trade discussions.

As the world moves into a multipolar environment and China rises in economic prominence, the rules governing subsidies, particularly to the industrial sector, are in the spotlight. The politics of reform are fraught, for a range of reasons ranging from states' geo-economic positioning, through paralysis in the World Trade Organization, to domestic social considerations.

This paper reviews the key issues that need to be considered if serious efforts to reform multilateral industrial subsidies regimes are to be engaged. The modality is a literature review, with the intention being to develop a multi-year research agenda based on the issues identified in the final section.

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Keywords

Subsidies; State-Owned Enterprises; WTO Reform; Global Value Chains

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List of Acronyms

AMS	Aggregate Measurement of Support
ASCM	Agreement on Subsidies and Countervailing Measures
CPTPP	Comprehensive and Progressive Trans-Pacific Partnership
EU	European Union
GATS	General Agreement on Trade in Services
GATT	General Agreement on Trade in Goods
GVCs	Global Value Chains
MFN	Most Favoured Nation
MNCs	Multinational Companies
OECD	Organization for Economic Cooperation and Development
SOEs	State-owned Enterprises
US	United States of America
WPGR	Working Party on GATS Rules
WTO	World Trade Organization

1 INTRODUCTION

In recent years, and particularly since the beginning of the Trump Administration in the United States of America (US), the issue of industrial subsidies distorting global trade has moved to the forefront of international trade debates. Industrial subsidies are regulated in the World Trade Organization (WTO) by the Agreement on Subsidies and Countervailing Measures (ASCM). While WTO members generally comply with WTO rules, some are alleged to have reneged on their commitments, with most of the focus being on China.

A principal concern relates to subsidies provided to and through state-owned enterprises (SOEs) by the Chinese government. The US and other Organization for Economic Cooperation and Development (OECD) countries have complained that China enables its SOEs to gain unfair competitive advantages in global markets (United States Trade Representative 2019). For example, the US believes subsidies play the leading role in generating overcapacity of Chinese steel-producing SOEs, thereby creating unfair competitive conditions for US workers and businesses by distorting the proper functioning of global steel markets. This concern, along with a range of other US complaints related to China's economic policies[1], underpinned by escalating geopolitical rivalry, recently led to a series of tit-for-tat tariff impositions on a number of Chinese and US export products worth hundreds of billions of dollars, threatening the functioning of world trade and the future of the WTO. Furthermore, the US, Japan, and the European Union (EU), collectively constituting the Trilateral Cooperation group, are advocating negotiations to reform the disciplines governing industrial subsidies.

A related concern is lack of transparency regarding notifications of subsidies of all kinds by many member states to the WTO. The underlying concern is that if the WTO's membership cannot adequately assess the patterns and extent of subsidization, particularly in relation to industrial subsidies, then forging rules to contain the negative impacts of subsidies on global trade will be elusive. The Trilateral Cooperation group argue that the WTO should discipline countries that fail to report subsidies, and have called for new rules that could penalize member countries that do not comply with WTO transparency and notification obligations.

Third, some countries, and notably the US (Reich 2018), have concerns with the WTO's dispute settlement system, which is the main body to resolve trade conflicts among members, singling out the Appellate Body for its rulings in this regard (see Section 3.3.2.1).

These concerns are fuelling interest in reforming WTO industrial subsidies rules. Yet the political economy of any reform process is fraught, to say the least. First, China is unlikely to agree to a one way process targeting them; the view in Beijing is that "WTO reform" should not be synonymous with "China reform". So while it is conceivable, if politically challenging, that a comprehensive subsidies reform effort could deliver enough for most WTO members to warrant initiating a process, it is also likely that a wider deal is necessary, and begs the question of what else should be on the table.

Regardless of the negotiation scope and dynamics, we believe that evidence based and analytical research to provide scientific answers to these fundamental questions is a crucial foundation for suggesting WTO reform options. This paper provides an initial framework by reviewing relevant literature, with a view to laying the foundation for subsequent specific studies.

The paper is structured as follows. Section 2 considers conceptual and definitional issues concerning subsidies, and challenges with measuring their prevalence across various types. Section 3 discusses the concerns related to SOEs as major players in the global market, provides background information related to their prevalence, and considers current regulatory frameworks governing their market conduct in relation to trade, at domestic, regional, and WTO levels. Section 4 considers current discussions concerning how WTO disciplines could be reformed, drawing on the preceding analysis.

2 SUBSIDIES RULES AND MEASUREMENT ISSUES

In considering what needs to be reformed in relation to industrial subsidies, amongst other forms of subsidisation, it is important to be clear on definitions, and the application of existing laws. These issues are canvassed in Section 2.1, in the context of the principle relevant WTO agreements.

[1]. Especially of China's industrial development strategies, notably the "Made in China 2025" document Mallick, M. (2018). "US-China trade war: analyses of Deeper Nuances and Wider implications." Vivekananda International Foundation, New Delhi.

2.1 WTO Agreements

Two agreements annexed to the Marrakesh Agreement Establishing the WTO are directly relevant, and each is discussed in turn.[2]

2.1.1 The Agreement on Subsidies and Countervailing Measures

Compared to previous agreements, the ASCM provides a clear definition of "subsidy", lays down stronger and detailed standards to conduct countervailing duty actions; and provides a workable multilateral discipline governing prohibited and actionable subsidies (Sykes 2005). The ASCM focuses on industrial subsidies, and defines subsidies as a "financial contribution by a government or any public body within the territory of a Member (referred to in this Agreement as "government")" which gives an unfair advantage to a specific industry, firm or even individual (WTO 1995). Five types of specific subsidies are identified:

- Cash payments such as grants;
- Tax concessions, such as exemptions, credits, or deferrals;
- Assumption of risk, such as loan guarantees;
- Government procurement policies that pay more than the free-market price; and
- Stock purchases that keep a company's stock price higher than market levels.

The ASCM categorizes industrial subsidies into three classes: prohibited (red light) subsidies; permitted yet actionable (yellow light) subsidies; and permitted non-actionable (green light) subsidies, which expired in 2000.[3] Prohibited subsidies require recipients to meet specific export targets or to use domestic goods instead of imported goods. They can be challenged in the WTO dispute settlement procedure where they are handled under an accelerated timetable. Actionable subsidies are actionable if they cause one of the following risks to a WTO member country: (1) injury to a domestic industry of another member country, (2) nullification or impairment of the benefits accruing directly or indirectly to another member or (3) serious prejudice to the interests of another member (WTO 1995). The WTO permits the actionable subsidies unless the complaining country shows the subsidy hurts its interests. The agreement defines three types of damage they can cause. First, one country's subsidies can hurt the domestic industry in an importing country, in which case the importing country can impose countervailing duties

2. While the plurilateral Subsidies Code negotiated during the Tokyo Round (1973-79) and interpretation of Article VI and XVI of the GATT 1947 made some contribution to the GATT 'acquis', they did not provide the desired level of clarification of rules on subsidies and countervailing measures, giving rise to need to negotiate the ASCM.

3. The three group of subsidies that were temporarily insulated from ASCM disciplines are certain R&D subsidies, regional development assistance, and subsidies to promote environmental protections.

provided it can prove injury has occurred. Second, subsidies can hurt rival exporters from another country when the two compete in third markets. Third, domestic subsidies in one country can hurt exporters trying to compete in the subsidizing country's domestic market. In the latter two cases, potential remedy for the aggrieved party lies in the WTO's Dispute Settlement Mechanism, by bringing a complaint for adjudication, and possible withdrawal of the offending subsidy or removal of its adverse effect.

2.1.2 The Agreement on Agriculture

Export subsidies that are in full conformity with the Agriculture Agreement are not prohibited by the ASCM, although they are subject to countervailing duties. At the 2015 Nairobi Ministerial[4] it was agreed to phase out export subsidies, and export subsidy equivalent programmes, immediately in the case of developed countries (with longer transitions covering processed products, dairy products, and swine meat) and with longer phase-outs for developing members and least developed countries (LDCs). Moreover, agricultural support in full conformity with the Agriculture Agreement is not actionable multilaterally, although they are countervailable.

Article 13 of the Agreement on Agriculture specifies special rules regarding domestic subsidies for agricultural goods. It does not have red box subsidies; rather subsidies are classified as amber box, blue box, green box and development box (S&D box)[5].

Almost all domestic support measures that distort trade and production fall in the amber box category and they are subject to limits, or the Aggregate Measurement of Support (AMS), grouped into product-specific and overall limits, with the combined sum referred to as the Total Aggregate Measurement of Support. The intention was to reduce members' AMS over time, an objective currently beyond reach given the impasse in the Doha round. That said, the AMS at least caps farm support at Uruguay round conclusion levels. Furthermore, there has recently been contention concerning India's recourse to price supports for its farmers, wherein the Indian government's 'public stockholding' programme expenditures breached its AMS commitments. An interim solution was agreed at the 2013 Bali Ministerial, subsequently updated in 2017, and allows developing countries to breach their domestic support limits for price support programmes ostensibly intended to promote food security.[6]

The blue box includes all amber box subsidies with conditions, where the conditions are designed to limit production. In principle it should lead to less trade distortions than Amber box subsidies, however, there are no spending limits on blue box subsidies, a matter of major contention in the Doha round, and currently given the substantial increases in US subsidies to compensate their farmers impacted by unilateral Chinese tariffs on their exports to China.

The green box is defined as subsidies that do not distort trade (or minimally distort trade) and therefore they are allowed without limit. The development box includes investment subsidies, agricultural input subsidies, and domestic support to encourage crop diversification in member developing countries.

2.2 Measurements of Subsidies and Data Issues

Subsidies may be given in many forms (Section 2.1), making accurate measurement a challenging proposition. Although subsidies data is generally scarce, it is especially more difficult for indirect and implicit subsidies, which makes it challenging to compare subsidies across countries, sectors and types. Such data is required across different countries, sectors and types; to estimate the potential effects of subsidies on domestic and foreign economies, such as competitiveness, trade, innovation, and investment. For instance, it is difficult to estimate the effects of subsidies on trade as subsidies may be levied for various objectives which may affect outputs, consumption, trade, and welfare.

A key constraint on research is the availability and quality of data. Below we highlight some relevant databases to contextualise this challenge.

2.2.1 Global Trade Alert database

One very useful recent source of data on the use of subsidies and related policy instruments is the Global Trade Alert (GTA). The GTA database documents all types of trade-discriminatory and trade liberalizing measures since June 2009. It is a comprehensive database of trade policies covering subsidies, import tariff changes, government procurement, licensing, as well as many other policies and regulations. This database reports the types of policy/regulatory change, the inception/removal date, implementing country, affected counties, affected products, and GTA evaluation. A limitation is that the data provides no information about the intensity of policies, rather the

4. See https://www.wto.org/english/thewto_e/minist_e/mc10_e/l980_e.htm#fnt-3, accessed November 27, 2019.

5. The WTO website contains a useful explainer, available at https://www.wto.org/english/tratop_e/agric_e/agboxes_e.htm (accessed November 24, 2019).

6. See https://www.wto.org/english/tratop_e/agric_e/factsheet_agng_e.htm (accessed November 27, 2019).

number of interventions. Using this database, we can observe how many subsidy policies are imposed and how the intensity varies across countries and sectors. While the GTA data base becomes a widely-used analytical tool for firms, industries, journalists, governments, researchers and international organizations, we can't use it to estimate the economic effects of subsidies.

According to the Global Trade Alert (GTA) report (Evenett and Fritz 2019), 348 trade distortions have been implemented by 36 countries where each distortion affects more than USD 10 billion of trade, and import as well as export subsidies are responsible for the biggest global trade distortions. By their reckoning, since 2009 different forms of subsidies are responsible for more than 90% of the trade distortions affecting $100 billion of global trade.

2.2.2 National datasets

The four principle countries/groups (Eg the EU) at the heart of current disputations concerning industrial subsidies all have national datasets of varying degrees of comprehensiveness and relevance. Since China is the principle concern for the Trilateral Cooperation group, we briefly set out available data sources in respect of that country.

At the firm level, we can analyze the effect of different types of subsidies using Chinese data obtained from the following four sources:

- **WIND database** – all firms publicly listed at the Shanghai and Shenzhen stock exchanges (potentially also those listed in Hong Kong and Taipei) for years 2009 onwards (around 3500 listed firms).
- **China Stock Market and Accounting Research dataset (CSMAR)**: a comprehensive database for Chinese business research, covering data on the Chinese stock market; financial statements and China Corporate Governance of Chinese Listed Firms. This database also provides detailed information about the directors of the listed companies.
- Annual Manufacturing Survey by the National Bureau of Statistics – all SOEs and large private firms for the years 2000 to 2013.
- **Chinese customs data** – at the transaction level containing imports and exports on the 8-digit HS level and firm information for the years 2000 until 2015.
- Compiled dataset containing all Chinese export tax rebates at the product level with information on the size of the usual VAT and potential rebates for the years 2000 until 2016.

2.2.3 National reports

There are also national reports, such as the German official subsidies report, which is published biannually. The Kiel Institute in Germany publishes its own assessment of subsidies to German firms. The first task for economists, then, is to identify relevant datasets to work with at the national level.

2.2.4 Other databases

- **Energy subsidies**: OECD and International Energy Agency (IEA) provides data for energy subsidies for 36 countries.[7] Energy subsidies are measures that keep prices for consumers below market levels or producers above market levels or reduce costs for consumers and producers. Kojima (2017) proposes a guide to quantifying energy subsidies, the impacts of subsidies and their reforms, and the political context for reform in developing countries.
- **R&D subsidies**: The Community Innovation Survey (CIS) – firm-level innovation surveys carried out with two years' frequency by EU member states from 2004 to 2014. R&D subsidies, and innovation public funding are reported in the survey by sources, types of innovators and economic sizes. The data is cross-sectional and accessible upon application.

3 STATE-OWNED ENTERPRISES, SUBSIDIES, AND INTERNATIONAL TRADE

In the following sections, we review the literature on the issues pertaining to subsidies received by SOEs; the growing prevalence of state-owned enterprises (SOEs) in international trade and potential concerns related to SOEs overcapacity, including the contribution of subsidized Chinese SOEs to U.S.-China trade disputes, and regulatory frameworks at the WTO and emerging regional level, via the Comprehensive and Progressive Trans-Pacific Partnership (TPP) Agreement.

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[7]. The data set can be freely accessed at https://www.oecd.org/site/tadffss/data/.

3.1 Issues with SOEs

Correcting market failure and fostering economic development are accepted as the primary motives to establish and maintain SOEs, and many countries use them for these purposes. In many countries, SOEs are established since natural monopolies are believed to provide substantial economies of scale in the production of goods and services. State ownership also allows for public (e.g. parks) and merit goods (e.g. basic nutrition and health services) provision which can be sub-optimally supplied by the private sector. The other major justification to establish SOEs is the infant industry protection argument. Predominantly, state ownership is viewed as important in countries with weaker regulatory frameworks, when private capital is insufficient and when public ownership is a good source of government revenue (Kowalski, Büge et al. 2013).

However, concerns are growing in the US, EU, and Japan, inter alia, that SOEs distort the playing field in international markets, negatively impacting-private enterprises. Subsidies can result in inefficient production of goods and services as well as crowding out private investment, thereby distorting international markets. According to Kowalski and Perepechay (2015), SOEs compete with private firms for market shares, ideas, resources, and intermediate inputs in the global marketplace. The US government, for example, argues that subsidised imports threaten high wage jobs and high value added manufacturing in the U.S.(Meltzer and Shenai 2019).

Subsidies to SOEs also affect the operation of Global Value Chains (GVCs)[8], with countries extensively using subsidy instruments to upgrade in the GVC by supporting investment activities that potentially provide highly productive jobs. Hoekman (2015) highlights that close to 80 percent of world trade involves large multinational companies (MNCs) shifting parts and components across borders, through operating GVCs; while (UNCTAD 2013) estimates that about 60 percent of world trade involves intermediate goods and services that are produced at different stages of the production process. The participation of SOEs in GVCs is increasingly prominent. According to Kowalski, Büge et al. (2013), the average share of SOEs in total international mergers and acquisitions was only 3% in the 1995-2007 period, increasing to around 10 percent within the 2008-2012 period, and reaching 21 percent in 2009.

As a result, concerns over the potential impacts of the internationalization of SOEs on market competition within the GVC framework are growing. However, the complicated interdependence between plants in GVCs processes makes it very challenging to identify the net effect of subsidies to SOEs on foreign countries economies. For example, subsidy interventions to address coordination failures can benefit all value chain participants including foreign plants, their workers, and local communities. On the other hand, Hoekman (2015) suggests that governments will have higher incentives to provide subsidies to SOEs, and to use subsidy-like instruments in a GVC-dominant environment. Such measures will create negative international spillovers (Ossa 2015) . By contrast, Baldwin and Venables (2015) provide an analytical framework to show the interaction of subsidies, as well as backward and forward linkages, in a GVCs framework, and illustrate that subsidies targeted to support local production of intermediate inputs will likely increase the industrial base.

Owing to the complexity of these GVCs linkages and interdependence, it is challenging to identify the correct magnitude of the effect. Consequently, and as suggested by the E15 Initiative Task Force, there is a pressing need for a comprehensive analysis of the overall impact of subsidies on GVCs (Hoekman 2015). Such analysis will provide evidence on whether current ASCM rules are sufficient to discipline government subsidies or whether the rules should be reformed.

In addition to subsidy benefits SOEs may obtain other advantages for themselves, and their home states, in comparison to private enterprise.[9] First, state ownership of foreign firms may make it harder for domestic private firms to pursue legal actions against them since foreign state enterprises may have "foreign state immunity". This can create gaps in the provision of regulatory enforcement between private and state-owned foreign firms. Second, provision of large government subsidies can result in cross-subsidization of overseas investment (strategic dumping) which may cause more risk taking tendencies by SOEs in global markets than private firms. Third, SOEs may be used to achieve domestic "policy objectives" on behalf of the home state through actions abroad including espionage, intellectual property theft; securing control of critical infrastructure facilities and of natural resources.

With regard to this latter point, the role of SOEs in supporting state foreign policy is a source of major tension underlying the political economy of the US-Sino trade war, as well as growing disquiet in Brussels at the strategic nature of Chinese investment in Europe. This has led to regulatory changes, including the passage of the Foreign

8. GVCs involve a set of firms in different countries jointly forming a production chain wherein different parts of the production process are carried out by firms in diverse countries. GVCs participation may be either in the form of forward or backward linkages. Forward linkage occurs if the firm produces an output that is used in production for export to another country; backward linkage exists if a firm uses imported components that are inputs for production that is exported. GVCs allow enterprises in different countries to specialize in specific tasks and activities. In addition, GVCs increase firms' interdependence in terms of delivering output on time, and satisfying required quality and standards across different nations.

9. See OECD (2016). State-Owned Enterprises as Global Competitors: A Challenge or an Opportunity?, OECD Publishing Paris. See ibid. for more discussion of 'foreign state immunity' on the link between international investment and SOEs.

Investment Risk Review Modernization Act (2018) and tightening of regulations pertaining to SOE investments into the US under the auspices of Committee on Foreign Investment Into the US; and in April 2019 establishment of an EU mechanism for screening foreign direct investments entered into force (Council of the European Union 2019). In the EU case, one factor to be considered during screening is 'whether the foreign investor is directly or indirectly controlled by the government, including state bodies or armed forces, of a third country, including through ownership structure or significant funding' [Article 4.2(a)]. Developments along these lines should make clear to all concerned that the current focus on subsidies by key actors is not simply an economic issue but involves wider geo-strategic considerations. Hence economic analysis of the subsidies issue will need to be supplemented by political economy considerations.

3.2 The prevalence of SOEs

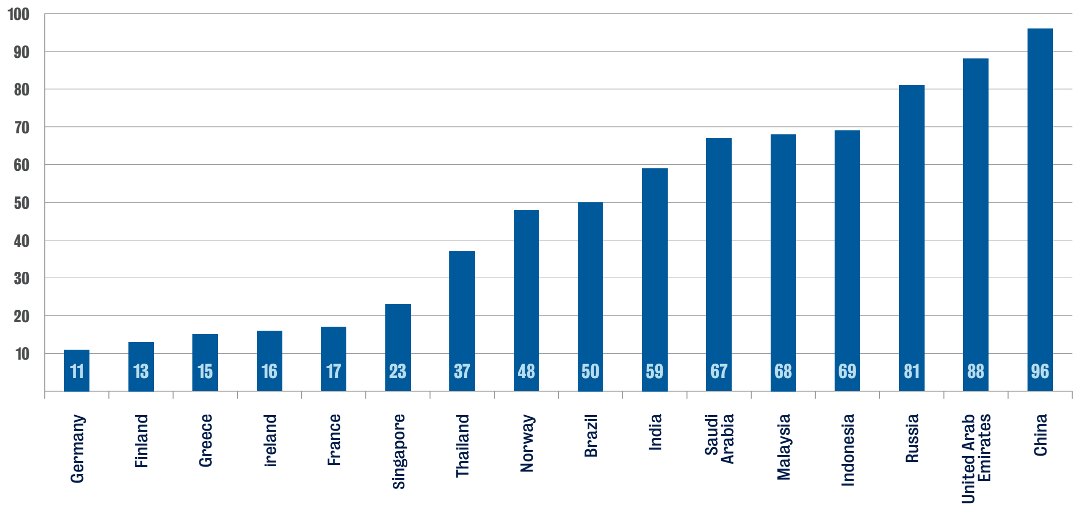
State ownership may take different forms. For example, in equity holding, the state may hold either all, the majority, or the minority of shares. However, even in the latter case, the state may have a de jure control as minority owner, such as Lower Saxony in the case of Volkswagen in Wolfsburg, Germany, or de facto controlling power despite holding minority voting rights. This means that measuring the prevalence of SOEs in many jurisdictions is not a simple matter.

Nonetheless, the prevalence of SOEs is increasing in the global market. For example, a recent OECD report found that in the 2010-2011 business year, 10 percent or 204 of the 2000 largest firms in the Forbes Global list were SOEs; while a 2016 study found that a total of 22 of the largest 100 global companies were state-owned, the highest number in decades (OECD 2016). In addition, SOEs constituted approximately 19 percent of the sales value of the global cross-border trade in goods and services during that period. This was equivalent to 6 percent of world gross national income (GNI) and exceeds the gross domestic product of countries such as Germany, the United Kingdom and France. Kowalski and Perepechay (2015) also suggest that the share of SOEs among the world's largest 2000 firms may have increased to 14 percent in the 2012-2013 business year. Overall the revenue and employment share of SOEs among the Fortune Global 500 has increased from 6 percent and 19 percent, respectively, to 20 percent and 30 percent from 2000 to 2011 implying a significantly increasing role of SOEs in the world economy in recent years.

The presence of SOEs is significantly higher in large emerging countries than in many OECD countries. Although the importance of SOEs in energy, telecommunications, transport and banking sectors is still large in some OECD countries, they are subject to corporate requirements, stringent financial disclosure and strict transparency standards just like private enterprises. Among the industrial countries, the incidence of SOEs is relatively large in Norway, Ireland, France, Finland and Greece. However, state ownership is very prominent in large emerging economies, mainly China, India and Brazil. Approximately half of the 204 SOEs in the top 2000 firms come from either China (70) or India (30), and only 5 countries (also including Russia, UAE and Malaysia) account for nearly two thirds of this total. The application of corporate governance standards to their SOEs also lags behind OECD standards (OECD 2016).

Figure 1 shows these large emerging countries' SOEs also tend to control the largest shares of ownership among the largest firms. China is the leading nation in terms of state ownership, followed by the United Arab Emirates (UAE) and Russia.

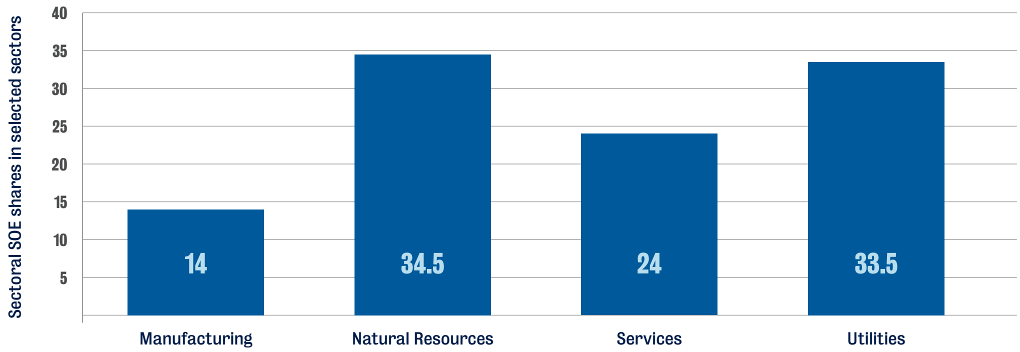
FIGURE 1: IMPORTANCE OF SOES AMONG COUNTRIES TOP TEN FIRMS, IN PERCENTAGE



Source: Kowalski, Büge et al. (2013)

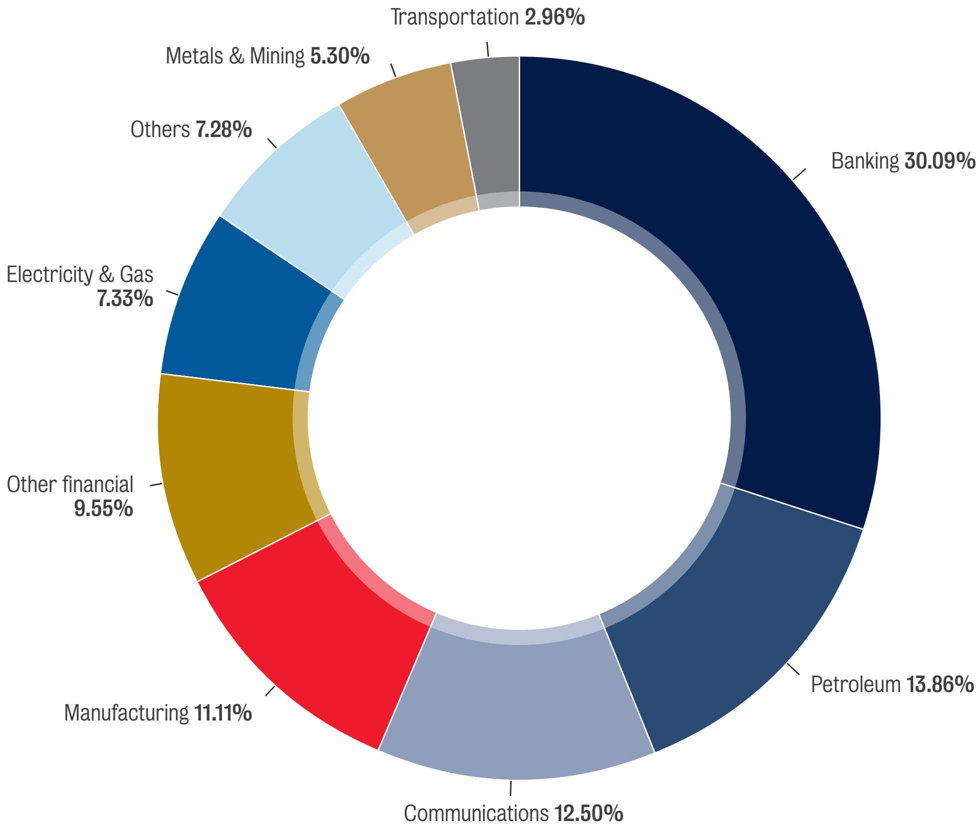
Note: The shares indicate the equally-weighted averages of shares of SOEs assets, sales and market value among the country's top ten firms.

FIGURE 2: THE SHARE OF SOES BY SECTOR (%)



Source: Author's calculation based on Kowalski, Büge et al. (2013)

FIGURE 3: THE SECTORAL BREAKDOWN OF THE WORLD'S LARGEST SOEs



Source: (OECD 2016)

Figure 2 shows the incidence of state ownership in 2011 in the OECD, BRIICS (Brazil, Russia, India, Indonesia, China and South Africa) and nine other countries within different sectors.

The state is strongly involved in natural resources and utilities, to a lesser extent in services, and less so in manufacturing, mining, civil engineering, transport, petroleum and gas, financial services and telecommunication sectors. Besides natural resources and the service sectors, state ownership is substantial in the manufacturing sectors (such as steel and aluminium) that are playing important roles in the upstream and downstream linkages of GVCs (Kowalski, Büge et al. 2013).

However, according to the 2015 Forbes 2000 Global ranking of firms, the share of financial sector SOEs is becoming increasingly prevalent. **Figure 3** also presents the sectoral shares of the largest 326 state-invested enterprises (based on market value) in the world. It turns out that more than 40% of the world's largest SOEs are dominated by the financial sector including banking and insurance firms. This is principally because of several Chinese banking and insurance SOEs; and minority state shareholding in several Western European banks (OECD 2016).

It is worth noting the prevalence of SOEs in the aluminium sector, in which China has become a leading producer in most segments of the value chain. The OECD (2019) has documented the unprecedented increase in output that fuelled concerns about excess capacity in the sector. After studying the 17 largest firms in the aluminium value chain, the OECD (2019) concludes that non-market forces[10] (especially subsidies) play a major role in the sector. The study shows that government support for the 17 largest firms reached around USD 70 billion in 2013-17. Although all 17 firms received government support, the largest financial subsidy recipients were Chinese SOEs.

As **Figure 4** illustrates, global aluminium production increased remarkably in the last two decades mainly driven by higher production in China. The report indicated that the aluminium price showed prolonged decreases over the 2011-15 period on the London Metal Exchange (LME). While most producers in China and the Gulf Cooperation Council (GCC) generated sustained solid profits, the price declines forced some EU and US aluminium companies to shut down their smelters owing to a marked fall in profitability.

The corresponding large aluminium output increase has fuelled concerns about the role of subsidies in producing excess capacity in this sector, distorting market prices downward and thereby causing economic damage to firms who do not receive subsidies. Consequently, the study suggests that new trade rules should be designed to discipline government support.

3.3 Regulatory Frameworks and Dispute Settlement

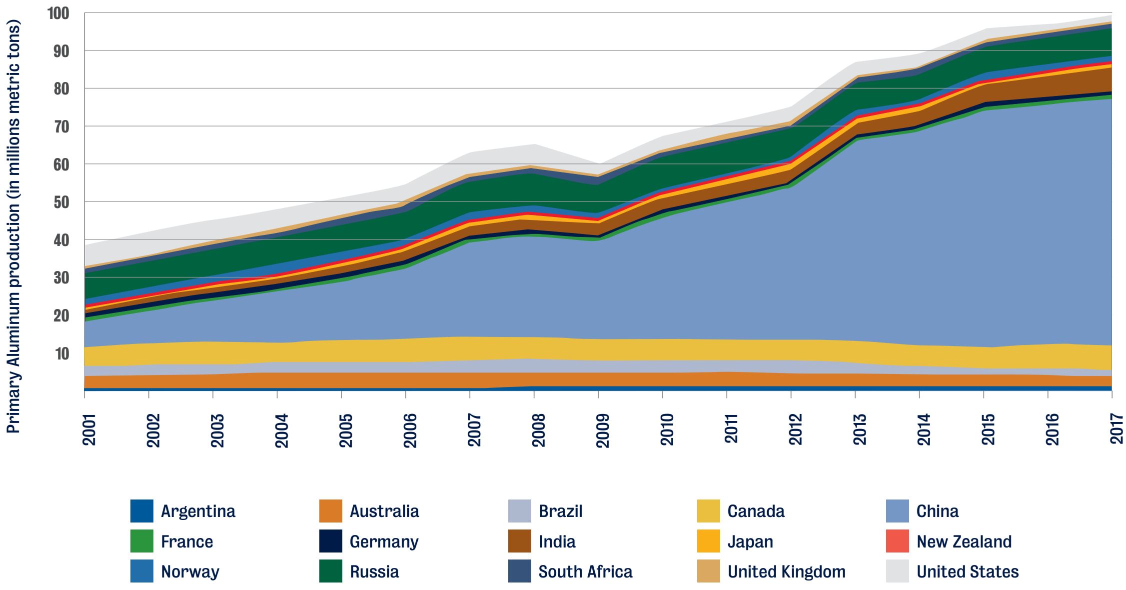
Anti-competitive behaviour of SOEs (and privately-owned enterprises) is managed by different regulatory frameworks and dispute settlement mechanisms, at various levels. This section considers how domestic policies, WTO rules and Free Trade Agreements (FTAs) help to discipline distortive government subsidy measures.

3.3.1 Subsidies and Domestic Policies

3.3.1.1 Ex-ante Regulation

Ex-ante regulation is the first place to look when considering where potential subsidisation problems lie. Generally, SOEs are governed by domestic law and regulations, which set the mandates of the SOEs concerned. Those laws and mandates should also conform to relevant WTO disciplines (see Section 0), as well as relevant FTAs (Section 3.3.3) the member countries and economies have joined. Sometimes the problem arises with the nature of the mandate, particularly when it accords market power to the SOE(s) in question and does not respect the principle of

FIGURE 4: GLOBAL PRIMARY ALUMINIUM PRODUCTION (IN THOUSAND METRIC TONS)



Source: OECD (2019), U.S. Geological Survey (2019)

[10] According to OECD (2019). "Measuring distortions in international markets: the aluminium value chain."
"Non-market forces encompass a wide range of government interventions that might help explain the persistence of excess capacity in the aluminium industry. At a broad level, this includes all policies that directly or indirectly favour increases in capacity that are not market-driven, either by encouraging the construction of new smelters or preventing the retirement of older ones."

competitive neutrality (Section 3.3.1.3). To the extent that these mandates are connected to provision of subsidies, the remedy lies in revising the mandate(s), and/or changing the laws and/or regulations that govern them.

3.3.1.2 Ex-Post Regulation: National Competition Policies

Some of the anti-competitive actions of SOEs such as predatory pricing and anti-competitive impacts related to merger and acquisitions can be handled by national competition laws. However, traditional national competition laws are usually designed to prevent dominant companies or cartels from restricting competition. Hence, some scholars argue that the role of national competition policies to fight the anti-competitive behaviours of SOEs is likely to be limited since government incentives to SOEs (such as subsidies) are not usually penalized under most countries' national competition polices (Capobianco and Christiansen 2011). Similarly, due to non-economic objectives, provision of subsidies, and lack of accounting transparency, calculating cost structures can be very difficult for SOEs. However, despite these challenges, national competition laws can address some of the anti-competitive behaviours of SOEs if they are properly implemented. Examples of the latter can be found in a number of OECD countries and the EU that require SOEs to face the same market forces and regulatory constraints as private firms must contend with (Kowalski, Büge et al. 2013). To wit, and as captured by the principle of competitive neutrality, we need not assume a priori that SOEs are market distorting entities. However, absent transparent institutional governance and clear national rules for regulating SOEs OECD countries want WTO disciplines that can effectively constrain negative SOE behaviour.

3.3.1.3 Competitive Neutrality in the OECD

The concept of competitive neutrality was first introduced by the Commonwealth of Australia in 1996 to express the idea that government business activities should not have a competitive advantage over private firms simply by virtue of government ownership and control. The principle of competitive neutrality was subsequently adopted in most OECD countries, where a number of reports were published to advocate competitive neutrality in terms of eight aspects, including: streamlining operational forms of government business; identifying costs of government commercial activities achieving a commercial rate of return; accounting for public service obligations tax, regulatory, debt and subsidy neutrality; and public procurement (OECD 2012). While these principles are not compulsory binding rules in the international trade system, they are mostly observed by OECD members, notably the US, Japan, and EU, both internally and via their FTAs (see Section 3.3.3.2 on EU 'state aid' legislation). For these actors the lack of transparency with regard to subsidy notification in China and elsewhere, along with concerns over competitive neutrality, serve as the basis for their push for SOE discipline reform.

3.3.2 WTO Disciplines

3.3.2.1 Subsidies and Countervailing Measures

Per the ASCM subsidy definition set out in section 2.1.1, the statement that a benefit must be conferred confirms that all government programs are not subsidies. For example, if a public body provides goods and services at the current market price this will not be considered a subsidy as a specific benefit does not arise. Regarding the definition of public body, the ASCM clarifies that a public body is "an entity that possesses, exercises or is vested with government power" (Kowalski and Perepechay 2015).

A US concern with the WTO route for settling subsidies grievances is over how the Appellate Body has ruled on subsidies related cases, notably the 2011 finding regarding the US Antidumping and Countervailing duties on China case[11] in which the Appellate Body ruled, inter alia, that WTO members cannot apply a blanket presumption to Chinese SOEs that if the government holds majority ownership they are "public bodies" and therefore open to countervailing duties.

The ASCM clearly describes the substantive requirements needed to impose countervailing measures, detailed procedural requirements to conduct countervailing investigations and impose countervailing measures. For example, the substantive rule of the ASCM requires that a member may not impose countervailing measures unless it determines the presence of subsidized imports that cause injury to domestic industry. Similarly, the ASCM's procedural rules detail the initiation and conduct of countervailing investigations; the imposition of preliminary and final measures; the use of undertakings; and the duration of countervailing measures. Failure by a member country to respect either the substantive or the procedural requirements of the ASCM when implementing a countervailing measure may potentially call into question its conformity with WTO rules (WTO (1995), Sykes (2005).[12]

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11. DS437: United States — Countervailing Duty Measures on Certain Products from China.

12. There is considerable WTO jurisprudence covering almost all articles comprising the ASCM; 127 disputes have been submitted at the time of writing. For further information consult the WTO website: https://www.wto.org/english/res_e/publications_e/ai17_e/subsidies_e.htm (accessed November 24, 2019).

3.3.2.2 State-owned Enterprises

WTO rules do not directly address SOEs, per se. Within the WTO framework, the General Agreement on Tariffs and Trade (GATT) – particularly Article XVII governing State Trading Enterprises, the ASCM as discussed in Section 3.3.2.1, and the Agreement on Government Procurement impose some disciplines to address the discriminatory and anti-competitive behaviours of SOEs in the area of goods trade. Similarly, the General Agreement on Trade in Services (GATS) attempts to impose some disciplines on the anti-competitive behaviours of SOEs in the area of services trade (Tsuyoshi and Masahito 2018). These WTO agreements contain relatively similar concepts such as "public monopoly", "state-trading enterprise", and "public body". Hence, some WTO agreements and rules are still applicable to SOEs. For example, the Antidumping agreement allows for imposition of antidumping duties on dumped imports irrespective of whether the exporter is a SOE, private owned enterprise (POE) or government. Similarly, while the WTO disciplines subsidies provided to both POEs and SOEs in the goods sector, the application of subsidy rules and disciplines is more complicated when the SOE acts as subsidies provider, such as a state-owned bank. In addition, the Chinese and Russian WTO Accession Protocols contain some provisions that specifically apply to state ownership. Although these accession protocols are integral parts of the WTO agreement, concerns have started to surface whether even the relatively strong provisions in China's Protocol particularly have adequately impeded trade-distorting policies that advantage Chinese SOEs (Kowalski, Büge et al. 2013). Further discussions regarding the completeness of these WTO agreements and the potential for future extensions in the multilateral system is provided in section 4.

3.3.3 Free Trade Agreements (FTAs)

Despite the availability of some multilateral and domestic rules, the existing rules are not enough to discipline the anti-competitive and market distorting actions of SOEs. For example, existing rules do not have clear corporate information requirements, such as on provision of financial information and business descriptions which are prerequisites to regulate SOEs (Tsuyoshi and Masahito 2018).

The limited success in international trade rules under the WTO has led some countries, particularly OECD members, in recent years to establish free trade agreements (FTAs) and bilateral investment treaties (BITs) that contain clear articles to discipline the discriminatory activities of SOEs. In the next few paragraphs, we briefly review the main rules and provisions of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) regarding SOEs (i.e. Chapter 17 of CPTPP) that addresses the anti-competitive policies of SOEs. We also consider the EU's State Aid rules.

3.3.3.1 The Comprehensive and Progressive Agreement for Trans-Pacific Partnership

Chapter 17 of the CPTPP agreement provides the first comprehensive international agreement that regulates the international commercial conduct of SOEs. Owing to each country's unique political and economic characteristics, and the potential value SOEs can bring (see Section 3.1) it is unrealistic to completely prohibit SOEs as countries have decided to utilise SOEs for certain policy objectives (as discussed in Section 3.1 Hence, the CPTPP introduces provisions which allow for the establishment and operation of SOEs in member states while disciplining their potentially disruptive effects on trade, investment, transfer of technology and other commercial activities.

The CPTPP includes detailed rules on competitive neutrality. Specifically, it introduced the new concept of non-commercial assistance (NCA), the main aim of which is to prevent adverse effects or injury to the interests of other Parties as a result of advantages that SOEs obtained from their home states.

Chapter 17 of the CPTPP agreement contains 15 articles (Article 17.1 to 17.15) and Annexes. Article 17.1 begins by defining SOEs as enterprises that mainly engage in "commercial activities" where a state party (1) directly owns more than 50 per cent of the share capital, (2) controls the exercise of more than 50 per cent of the voting rights or (3) has the power to appoint a majority of members of the board of directors or any other equivalent management body. Paragraph 1 of Article 17.1 defines "commercial activities" as activities that are oriented towards generating profit. Hence, non-commercial activities and those activities that only recover cost of production are not included in this particular definition.

Chapter 17 of the CPTPP document provides a core obligation for SOEs and private monopolies to act in accordance with "commercial considerations", meaning that the terms and conditions of selling and purchasing goods and services such as price, quality and other similar activities should normally take place in accordance with privately owned enterprises commercial decisions (Article 17.4).

In addition, as the major concern over SOEs concerns the adverse effect of competition-distorting government financial assistance (subsidies) to these firms, Article 17.6 of chapter 17 of the CPTPP disciplines "non-commercial assistance"[13], defined as assistance to SOE by virtue of the SOE's government control or ownership. Article 17.6(1) states that:

> *No party shall cause adverse effects to the interest of another party through the use of non-commercial assistance that it provides, either directly or indirectly, to any of its state-owned enterprises with respect to:*
>
> *(i) the production and sale of a good by the state-owned enterprise;*
>
> *(ii) the supply of a service by the state-owned enterprise from the territory of the Party into the territory of another Party; or*
>
> *(iii) The supply of a service in the territory of another Party through an enterprise that is a covered investment in the territory of that other Party or any other Party.*

In addition, article 17.6(3) states that the non-commercial assistance (subsidy) provided to SOEs should not cause injury to the domestic industries of other CPTPP parties. Article 17.8 sets out how injury should be determined.

The transparency Article (17.10(1)) provides that "each Party shall provide to the other Parties or otherwise make publicly available on an official website a list of its state-owned enterprises no later than six months after the date of entry into force of this Agreement for that Party, and thereafter shall update the list annually", and also governs requests for information from Parties concerning the governance and activities of SOEs within another Party.

Chapter 17.13 allows for exceptions under certain conditions. For example, the provisions of non-discrimination and non-commercial assistance should not be interpreted to prohibit Parties from undertaking (a) measures to deal with national or international economic emergencies and (b) temporary measures when such emergencies continue to exist. Furthermore, Annex 17A to 17F contain provisions for general and specific exceptions; including threshold calculations governing the size of SOEs to be governed by Chapter 17, informational requirements pursuant to implementing the transparency provisions, application to sub-central SOEs and designated monopolies, and specific exceptions for Singapore and Malaysia.

While the CPTPP is a regional agreement for the Asia-Pacific region, the principles and provisions incorporated in it have potential to become international standards to regulate the commercial conduct of SOEs. According to Chaisse, Gao et al. (2017), Chapter 17 of the CPTPP chapter is particularly useful since this is the first comprehensive international agreement in the area. As such, this chapter will serve as an important guideline for FTA negotiations that consider SOEs in the future. Despite that, Chaisse, Gao et al. (2017) identify two key problems in Chapter 17. First, the definition of SOE provided in the chapter is too narrow. Chapter 17 defines SOEs as enterprises where the state controls more than 50% of stock. However, the authors argue that even if the state ownership is less than 50%, the government can control SOEs indirectly through different ways. Second, the meaning of "activities oriented toward profit-making" is not clear and may be subject to different interpretations. For example, business entities such as cooperatives and trade unions operate in a competitive market without making profit implying the importance of more comprehensive definitions.

3.3.3.2 The EU's 'State Aid' rules

The EU has laid out extensive state aid legislation in the Treaty on the Functioning of the European Union (TFEU).[14] Within this legislation the concept of competitive neutrality is prominent, as too are permissible exceptions to state aid. Beginning with the EU's concept of state aid, Article 107(1) of the Treaty states:

> *…any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market.*

As outlined by the European Commission[15], four primary features of 'State aid' are as follows:

(1) aid arising from State intervention or through State resources;

(2) the intervention is advantageous to the recipient on a selective basis;

(3) this advantage distorts competition; and

(4) The State aid will likely impact trade between EU Member States.

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13. According to the TPP agreement, non-commercial assistance includes provision of money, debt forgiveness, loan guarantees at a rate lower than those sourced on the commercial market, capital investment contrary to normal investment practices, provision of goods and services below commercial market prices, and provision of infrastructural facilities above the regular infrastructure provision (Article 17.1, Definitions).

14. See: Title VII – Common rules on competition, taxation, and approximation of laws, Section 2, Aids Granted by States.

15. European Commission: 'What is State Aid?' available at: https://ec.europa.eu/competition/state_aid/overview/index_en.html (accessed on 02/12/2019).

Article 107(2) and 107(3) outline a number of exceptions to the State aid rule, including:

(1) consumer aid for social reasons, so long as there are no attached discriminatory rules of origin for the products involved;

(2) aid for natural disasters or similar exceptional circumstances;

(3) aid for developing areas with high socio-economic deprivation;

(4) aid for projects promoting common European interests; and

(5) Aid to promote 'certain economic activities' so long as it 'does not adversely affect trading conditions to an extent contrary to the common interest'.

The Commission also explicitly retains the right to add further categories of exception in Article 107(3), subsection (e). It is clear that not only is there scope for exception in EU State aid law, but also that some exceptions are worded in ways that hold the prospect for open interpretation and subjective assessment, e.g. point (5).

Article 108 outlines the commitment by the Commission, in cooperation with member States, to keep up-to-date supervision of their existing state-aid systems. Members are strictly bound to notify the Commission of any changes/additions to their aid programs, while the Commission holds strong investigative and enforcement powers. Investigation powers were strengthened in a 2013 revision of the State aid Procedural Regulation that allowed the Commission to conduct State aid sector inquiries. Previously these could only occur as part of an Antitrust and Merger assessment. Transparency is high on the agenda for the Commission, and all notification data is available to the public through an online portal, State Aid Transparency Public Search.[16]

With regards to the operation of SOEs, or other public bodies engaging directly in commercial activity, the Commission follows the principle of competitive neutrality when assessing whether State aid has been forthcoming. The assessment is termed the 'market economy operator' (MEO) test, whereby:

> *Economic transactions carried out by public bodies (including public undertakings) do not confer an advantage on its counterpart, and therefore do not constitute aid, if they are carried out in line with normal market conditions'*
> (European Commission 2016)

The MEO test is specifically designed for application to public bodies acting as economic operators, e.g. SOEs, and is typically not applicable when the State is discharging its public authority obligations (for example social, regional and sectoral policy actions exempted in Article 107). Exceptions aside, the EU's MEO test is similar in substance to the 'commercial considerations' element of Chapter 17 in the CPTPP agreement, which states that SOEs must behave according to the same commercial logic as would private firms, thereby ensuring no market distortions arise through SOE actions. Potentially, either the EU's legislation on State aid, or the CPTPP's provisions could provide the basis for WTO reform, particularly if China joins the latter in the future.

4 WTO REFORM AND SUBSIDIES NEGOTIATIONS

4.1 Scoping the cross-cutting issues

"Revising current WTO rules" versus "utilization of existing WTO rules" issue is a major discussion topic among trade policy researchers, policy makers and practitioners (Griswold and Boudreaux 2019). New proposals to revise WTO rules include rewriting trade rules for industrial subsidies, state-owned firms, and technology transfers. The two key areas where WTO members are attempting to carry out reform are competitive neutrality and transparency Proposals to use current rules include improving the transparency of subsidies reports, initiating disputes against subsidies, and starting more bilateral negotiations between the US and China.

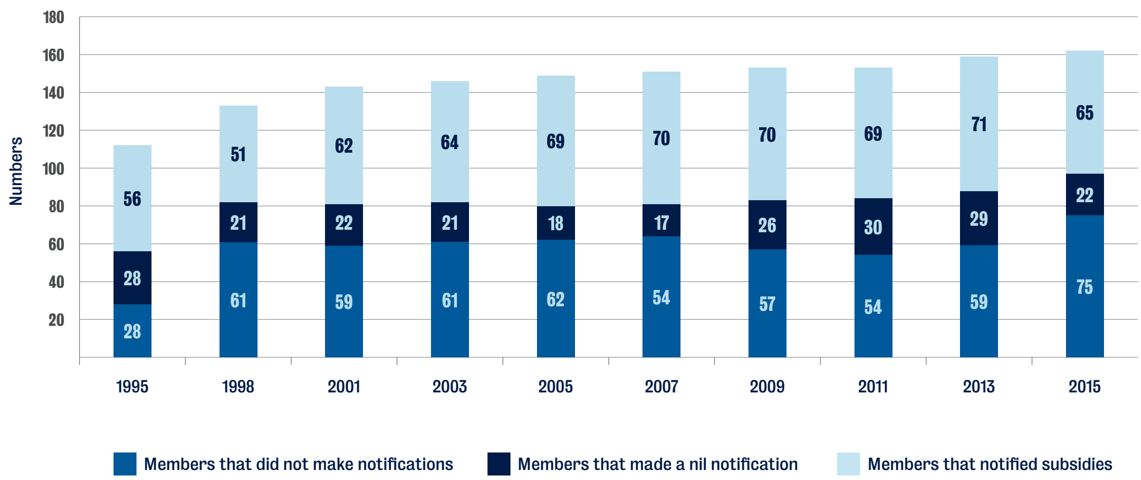
The EU proposed to include the principle of competitive neutrality in WTO reform talks in September 2018. The US, Japan, and some other WTO members also have concerns about lack of competitive neutrality in China owing to subsidies provided to SOEs. In October 2018 the Chinese central bank governor stated that China will consider treating SOEs with the principle of competitive neutrality[17], thereby accelerating domestic economic reform and addressing structural economic problems in China. This apparent consensus on embedding competitive neutrality in the WTO among its main members implies the possibility to create a mechanism of cooperation, transparency, and effectiveness in WTO subsidy reform.

16. https://webgate.ec.europa.eu/competition/transparency/public/search/home/ (accessed 02/12/2019).

17. https://www.caixinglobal.com/2018-10-16/competitive-neutrality-for-state-firms-can-help-china-at-home-and-abroad-101335637.html

Improving transparency mechanisms through notifications would facilitate understanding of governments' subsidies. The GATT/WTO has the transparency provision that countries maintaining any subsidy should notify the extent and nature of the subsidization, the estimated effect of the subsidization on the quantity of the affected product or products imported or exported from its territory; and the circumstances making the subsidization necessary. The ASCM expanded the notification obligations of WTO Members with detailed requirements for annual notification of any defined subsidy and a mandate for the WTO Subsidies and Countervailing Measures Committee (SCM) to examine these notifications on a regular basis. However, few WTO members comply by providing subsidy notifications regularly. Figure 5 shows that consistently less than 50% of members comply with subsidy notification obligations. The reasons are complicated. Some countries have difficulties with understanding the definition of subsidies and the concept of specificity. Some countries face data constraints. Some countries are afraid that reporting subsidies information gives rise to self-incrimination. The current notification and surveillance tools require significant reform to improve the transparency of the WTO system. (See **Figure 5**)

FIGURE 5: SUBSIDY NOTIFICATION COMPLIANCE 1995-2015



Source:WTO (2019)

Assuming that notifications can be substantially improved, in principle measurement of subsidies being paid could also be substantially improved. With better traction on the quantum of industrial subsidies in the system, as well as the beneficiary firms and sectors, it could conceivably become possible to negotiate quantitative constraints on countries' recourse to them, perhaps along the lines of the Agreement on Agriculture's AMS, drawing in turn on the OECD's concepts of Producer Support Estimate (PSE) and Consumer Support Estimate (CSE).[18]

A final consideration is that WTO members could draw on WTO disputes jurisprudence regarding cases lodged under the ASCM. Specifically, where panels and/or the Appellate Body have ruled on the legality and/or actionability of specific subsidies, such rulings could be consolidated into an updated ASCM, with focus on refining, inter alia, definitions of subsidies; Parts II through IV dealing with the different kinds of subsidies as well as those which are prohibited, actionable, and permitted; rules governing countervailing duty measures (Part V); and rules governing notifications and surveillance (Part VII).

4.2 Candidates for subsidies reform negotiations

4.2.1 Goods, or industrial sectors

Evenett and Fritz (2019) suggests the priority should be to reduce crisis-era discrimination and restore the world trade system to its pre-crisis state rather than pursue liberalization through WTO initiatives. Using data-driven approaches over more qualitative approaches to identify WTO reform options, the report proposes various critical mass accords[19], on a most-favored nation (MFN) basis, where countries can opt into and leave without any penalty. The report suggests both single-sector critical mass accords and multi-sector deals in different key sectors.

18. For an explanation of the concepts and methodologies, see http://www.oecd.org/economy/outlook/34315829.pdf, accessed November 26, 2019.

19. Meaning that all the key trading powers relevant to the negotiation in question must participate, to avoid the problem of free-riding from undermining the logic of making concessions– in other words from making the results of liberalization available to non-members of the accord in question.

A total of 31 sectors were examined for the single sector mass accords. According to the GTA study (Evenett and Fritz 2019), a single sector critical mass accord in special purpose machinery will provide benefits to the EU, Japan, China, the US, Canada and Korea. This particular accord would attract 30 WTO nations where 14 of them need to remove crisis-era trade discriminations. An estimated $142 billion of the $557 billion special purpose machinery trade could benefit from the elimination of crisis-era discrimination in this sector. In addition, agreements to remove crisis era discrimination in transport equipment and general purpose machinery could attract 38 participants, constituting 86 percent of the sectors' trade, including, inter alia, China, India, the EU, the US, Turkey and South Africa.

As far as the multiple sector accords are concerned, the study finds that a 3 sector deal which removes crisis era discrimination in the man-made fibres, base metals, and transport equipment sectors could benefit 76 WTO members at different levels of economic development. Moreover, additional 67 multiple sectors deals that include China, the EU, the US, and Japan could reform more than $2.5 trillion of trade. Each sectoral accord involves elimination of trade discrimination in three or more sectors that provide net gain to the four big players. Overall, removal of crisis-era distortion that mainly includes industrial subsidies in 5 of the 10 largest sectors could deliver real benefits for WTO member countries (Evenett and Fritz 2019).

4.2.2 Subsidy Disciplines in Services Trade

The ASCM was developed for goods trade, and is not an appropriate model for services (Sauvé and Soprana 2018). Yet services are crucial components of GVCs, and increasingly important in global trade, with SOEs being involved in many different kinds of services provision. Governments may want to retain a broader scope for subsidization in the pursuit of social, cultural, and general development objectives. While the GATS also provides for information exchange on subsidies among members, very little information has been provided to date (Locatelli 2019). One reason is there is no clear definition of service subsidies, and formulating a definition proved elusive when the Working Party on GATS Rules considered the issue under the auspices of the Doha round, a process suspended in 2016 owing to lack of progress. The GATS has no implications for the funding or subsidy of services provided in the exercise of governmental authority. A second reason is the blurred nature of services and service trade. Another reason is the difficulty of collecting services subsidy data, with members not having provided sufficient data under the auspices of the WPGR process. Negotiations on services subsidies will be an important direction in future negotiations.

4.2.3 R&D Subsidies, Innovation and WTO Disciplines

Since technology is at the heart of the growing "strategic distrust" (Lieberthal and Jisi 2012) between the US and China, subsidisation of leading industries of the future that will drive the "Fourth Industrial Revolution" (Schwab 2016) is a critical consideration. Research and development subsidies are a keenly contested arena in this respect, and have been actionable since the sunset clause applicable to them expired 5 years after the WTO Agreement entered into force (ASCM, Article 31).

According to Maskus (2015), two views are commonly expressed regarding the issue of disciplining R&D subsidies under the WTO system. The first is that R&D activities that would not occur without government support should not be actionable. The key argument is firms do not expect to reap the full benefit of some R&D activities suggesting market failure that should be corrected through government interventions, which can produce the socially desirable quantity of R&D. Moreover, since the R&D is funded through the public purse, it should be freely available to the public that seeks to use it. Given the critical role of R&D led economic growth and development to increase productivity and employment, many countries (especially the large developing countries) may welcome such reforms under the WTO to make them non-actionable.

In contrast, some argue that R&D subsidies may potentially distort global trade and investment for four main reasons (Maskus 2015). First, large sums of subsidy support can distort international trade and investment. Second, competition for R&D subsidy may emerge which results in excessive R&D support relative to some welfare norm. Third, the likelihood of mislabelling other forms of subsidies as R&D subsidy would exist if WTO member countries continue to implicitly exclude R&D subsidies from disciplining them under the WTO. Fourth, governments may resort to employing R&D subsidization as an instrument of implicit protectionism mainly during periods of economic crisis.

Clearly, R&D subsidy discussion is a key reform area in the WTO reform process.

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