

Working Paper

Spillovers, Subsidies and Multilateral Cooperation

Addressing Concerns Over Industrial Subsidies

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Abstract

Negative international spillovers created by nontariff policies are a rising source of trade tensions and conflicts. The WTO does not include rules for subsidies for services industries, state-owned enterprises or investment incentives. Existing disciplines on industrial policies are increasingly seen to be inadequate by many WTO members. Efforts to revisit and expand rules for contested policies must recognize the changing nature of international production. A first step in addressing trade conflicts associated with industrial policies is to determine where negative international competition spillovers are both large and systemic in nature. Doing so requires going beyond trade ministries and bringing in finance and line ministries, as well as competition agencies and international organizations with expertise in collecting information on subsidies and analyzing their effects.

Keywords: Trade agreements, subsidies, spillovers, international cooperation, WTO

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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 Professors Bernard Hoekman and Douglas Nelson for their 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 Summary¹

A central source of current trade tensions are national subsidy policies. This is not simply a ‘China issue’. Subsidies constitute the great majority of trade interventions imposed since 2009. Data on non-tariff policies are notoriously patchy, as WTO notification requirements generally are only partially complied with, if at all. An independent initiative that compiles data on trade policies, the Global Trade Alert, has documented over 20,000 policy measures affecting trade taken since 2009 by G20 members, with subsidies accounting for more than 50 percent of all measures.

Any policy by a government that disadvantages one activity relative to another will have advantage the latter. It is therefore necessary to recognize that if the goal is to discipline policies that give rise to negative international spillovers, the focus of attention must be on effects as opposed to narrowly defined policy instruments. The focus of WTO subsidy rules is on potential adverse effects of national measures on foreign products. A broad notion of actionable subsidies is used: measures that impose a direct burden on the government budget (including fiscal transfers through tax expenditures). To be actionable a subsidy must be specific (as opposed to benefitting economic activity more generally), and convey a benefit to the recipients. Financial support for exports and local content requirements are prohibited.

Historically, the center of attention of WTO members on subsidies has been agriculture, reflecting the extensive trade-distorting support provided by European countries in particular to this sector in the 1980s and 1990s. The main WTO instrument for non-agricultural subsidy-related policies, the Agreement on Subsidies and Countervailing Measures, prohibits export subsidies and regulates the use of countervailing duties to offset injurious effects of foreign subsidies on domestic producers. The agreement applies only to trade in goods.

WTO disciplines were crafted in the 1980s, before the rise of global value chains, the emergence of China as a major trading nation, and the growth in trade in services and the digital economy. They are outdated. They do not cover investment incentives or services activities. They leave unclear how to treat the activities of state-owned enterprises and whether such entities are a ‘public body’ or whether input subsidies or differential taxes that lower domestic prices of inputs are covered.

Unlike tariffs, subsidies are appropriate instruments for many policy goals, but like tariffs they will generally have spillovers via effects on trade. To be successful, any revision of the international subsidy regime must rest on a clear understanding that the economics and politics of subsidies differ across polities; consider the goals that motivate their use; and the nature of cross-border spillovers they create. Virtually any significant policy action by a large trading economy will affect trade, often but not always unintended. The optimal response to spillovers will vary depending on the policy-maker’s objective function.

WTO rules pay no attention to the objectives of governments using subsidies. There is no notion in the WTO of what constitutes a “good” subsidy. This contrasts with the EU and some recent trade agreements that recognize the legitimate role of certain types of subsidies and establish a presumption these are not objectionable. An economic approach is used to assess whether a subsidy effectively addresses a market failure or objectives of common interest, balanced against associated negative effects on competition in the relevant market. An important feature is a shift away from rigid ‘hard law’ rules to focusing on the effectiveness of subsidies in attaining economic and noneconomic objectives and their effects on markets.

The international subsidy regime can move in this direction through application of relatively simple, robust rules of thumb derived from the theory of economic policy. These recognize the right of nation states to engage in a wide range of domestically warranted subsidy policies, but also that conflicts will emerge over modalities and levels of

¹ This note summarizes the main arguments of two papers by the authors: (i) Subsidies, Spillovers and Multilateral Cooperation; and (ii) Re-thinking International Subsidy Rules.

acceptable competitiveness spillovers. Making such conflicts the subject of technical discourses focused on establishing the goal of a subsidy, whether it addresses a market failure, and whether trade spillover effects are necessary to achieve the goal may deflect much of the political heat associated with conflicts over inherently domestic issues.

A revamped subsidy regime requires participation of the United States, the European Union, and the People's Republic of China – the three global trade powers. The rules must be seen as supporting the generalized gains from open trade and global production, not an attempt to isolate or 'reform' China. At the same time, China should accept that it has a leading role to play in the regime. The three majors should recognize that their political economies are consistent with a broadly liberal international regime even though they are, and will remain, profoundly different from one another.

Accommodating system differences will be facilitated by distinguishing between competitive spillovers arising from policies to address global collective action problems and market failures and those stemming from national industrial policies. The former should be treated differently from the latter. A corollary is that governments must both elucidate their policy goals and cooperate in determining the magnitude and incidence of any cross border spillovers. A rule of thumb creating a presumption in favor of national treatment can narrow the range of conflict, as nondiscrimination will be more efficient in attaining policy objectives.

This is not new ground for the WTO. An initial, time-limited effort was made to include a category of nonactionable subsidies in the WTO, but this expired in 1999. It was too narrow, and did not distinguish subsidies that address (global) market failures from those that do not. It is past time that WTO members revisit what was started over 20 years ago. Preparing the ground requires a collective effort to measure and analyze the prevalence and effects of subsidies, using robust, transparent methodologies. A cooperative rather than adversarial approach is called for, centered on deliberation informed by a concerted data collection program and analysis.

At this point in time, no international platform exists that brings together national Finance and Economy ministries, national competition authorities and international organizations concerned with the governance of subsidies. Building bridges across these groups can help provide a basis for mutually beneficial cooperation on the use of subsidies and measures to address the negative competitive effects of such policies. The more that the use of subsidies is treated as a technical, not a political, endeavor the greater the likelihood of an epistemic community on subsidy issues taking root.

Development of a body of professionally competent, peer reviewable, internationally balanced work will generate common ways of talking about and thinking about the issue of subsidies. For all the differences in national economic and political regimes, a better understanding of the goals, prevalence and effects – and effectiveness – of subsidies may support agreement over time on good practice norms and standards. As those become more widely accepted, national governments can legitimate subsidy policy internationally by adopting those standards.

Delegation of both measurement and analysis to a trusted, neutral and technically capable body is critical to support the needed deliberation by states. The OECD has played this role for decades in producing comparable analyses of subsidy regimes in agriculture. This work illustrates the importance of going beyond documenting policies to measure the magnitude of interventions using well-defined indicators. Producer support estimates played such a role in agriculture – analogous measures should be developed that are not sector-specific and permit monitoring and assessments of the economic incidence and effects of subsidy policies.

Many international organizations collect information and monitor the use of different types of subsidy instruments. A joint initiative that encompasses the relevant specialized international organizations to develop and apply appropriate measures and analysis of subsidy policies would provide the technical basis for more informed discussion and the design of cooperation in this area. The G20 Trade and Investment Working Group, an existing mechanism that includes the core international agencies and in which the major emerging economies are members, could be the focal point of such an initiative.

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

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

Introduction

It has become a platitude that we live in a supply-chain world. This has changed the relative importance (salience) of different types of trade and external policies. The organization of global value chains (GVCs) is very sensitive to transactions costs. Policies that raise (reduce) operating costs will lower (increase) the competitiveness of activities in specific locations and influence the allocation of investment. Participation in GVCs is conditional on low barriers to trade and efficient national regulatory systems that minimize delays in border clearance and uncertainty with respect to the ability to enforce contracts, attain production quality standards and protect intellectual property. Policy design and international cooperation in a GVC world is more complicated relative to a world where goods are produced with domestic factors and inputs and supply chains are national. For example, production subsidies in one country (location) may have the effect of assisting production and exports in another. International specialization, in conjunction with the associated flows of FDI, attenuates the incentives to use traditional trade policy instruments (Blanchard, 2015; Gawande et al., 2015).

While tariffs and related border policies become less effective as an instrument of industrial policy in a GVC world, governments continue to have incentives to support domestic firms and local employment, and firms continue to have incentives to lobby governments for assistance. Subsidies and subsidy-like interventions have dominated the post-2008 trade policy landscape. These types of instruments are used to target specific domestic economic activities deemed desirable from an economic growth and development perspective. This is nothing new. The motivations and pressures to assist domestic economic activity have not changed simply because the structure of international production has changed in the last 20 some years. What has changed – notwithstanding the pursuit by President Trump (“Tariff Man”) of an aggressive unilateralist trade policy – is the decline in the relative weight of traditional border protectionism in the trade policy of most governments.

Analogous to tariffs and similar at-the-border protectionist instruments, domestic policies that support local economic activity may create negative international spillovers. Such interdependencies become more prevalent – and more complex – in a GVC world. Important questions for policy are to determine the magnitude of the negative spillovers created by industrial policies and whether and how to redesign multilateral rules to discipline the use of measures that result in negative externalities for trading partners and the trading system. All governments pursue policies that affect the operation of markets. What has increased the political salience of industrial development policies as a perceived source of negative spillovers for other countries is the rapid growth of China and views that large-scale subsidization of Chinese firms, especially state-owned enterprises (SOEs) is one reason for China’s success.

A distinct feature of concerns about the implications of the rising share of China and other emerging economies in world production and trade is the role and prevalence of SOEs in these economies. An estimated 22% of the world’s largest 100 firms are effectively under state control (OECD, 2016). In 2018, Chinese firms accounted for 22% of the list of largest 500 firms globally compiled by Forbes magazine.² The five largest Chinese companies in the list – 20% of the top 25 global companies – are all SOEs. Many SOEs operate in GVC-intensive sectors, both upstream such as energy and downstream such as transport, and often are active in cross-border mergers and acquisitions (outward FDI). Concerns about the potential for SOEs to distort competition reflect views that SOEs are effectively subsidized (through soft loans, guarantees, preferential access to factor inputs other than directed credits, such as energy and land) and may indirectly subsidize downstream firms in both home and foreign markets through below-market pricing for their goods and services. In addition, SOEs may benefit from protection from foreign competition (e.g., reflected in FDI restrictions; joint venture requirements; preferential access to public procurement markets, etc.).³

² See <http://fortune.com/global500/list/filtered?hqcountry=China>.

³ Empirical evidence for Chinese SOEs has documented that they have a lower cost of capital (reflected in lower interest rates on their debt) and that privatized SOEs continue to benefit from government support relative to private enterprises (Harrison et. al, 2019; Wood,

The US, EU and other WTO members argue additionally that China has put in place incentives for firms to invest rather than serve the market through exports and supports Chinese firms operating on international markets. The resulting trade tensions have led to the use of countervailing duties against Chinese exports and discussions among the EU, Japan and the US to identify gaps in extant WTO disciplines and ways to strengthen rules for subsidies, SOEs and technology transfer policies. The trilateral discussions focus on suggestions to expand the existing list of prohibited subsidies in the WTO and to define SOEs as ‘public bodies’ to allow action against products that have used inputs provided by an SOE (e.g., intermediate inputs, credit). A general aim is to broaden the definition of what constitutes an actionable subsidy – e.g., open-ended financial guarantees; support for insolvent or failing companies with no credible restructuring plan; and preferential pricing for inputs such as raw materials and components.⁴

A basic problem in the design of international rules for subsidies and related industrial policies is to strike a balance between the legitimate role of governments to support economic development goals and to address market failures on the one hand and the negative spillovers that that domestic policies may create on the other. This paper reflects on these questions. We argue that elements of the current rules embedded in the WTO are no longer fit for purpose. We also make a case that the solution involves a shift in approach to recognize there are legitimate reasons for governments to use subsidies. There is a strong case for WTO Members to launch a process to identify and assess the use of competition-distorting policies, and to provide a forum in which to discuss the impacts and spillover effects of specific policies on investment decisions and trade. A precondition for determining whether new disciplines are needed, or old ones should be adapted, is information and analysis: empirical research on the magnitude and incidence of negative international spillovers that are created by prevailing policies. Whatever the normative case for stronger multilateral rules on industrial policies, greater transparency (information on applied policies) and assessments of impacts is needed to inform both domestic policy processes and the design of international cooperation (rulemaking).

What follows starts with a brief summary of post-2008 trends in the use of subsidies. Section 2 reviews potential rationales for government intervention in a GVC-driven world economy. Section 3 discusses gaps in the existing rules. Section 4 turns to implications for the design of international cooperation aimed at reducing international spillovers and containing subsidy-related trade conflicts. Section 5 concludes.

1 Use of trade-related policies since 2008

Data on non-tariff policies are notoriously patchy. WTO notification requirements generally are only partially complied with. Incomplete and out-of-date information applies even for measures that are subject to explicit commitments in the WTO such as export subsidies for agricultural products, impeding analysis of the effects of policies and the effectiveness of trade disciplines – see e.g., Hoekman and Messerlin (2006). The trend seems to be that WTO Members are notifying fewer measures and with greater delays. The percentage of Members that did not submit notifications on subsidies rose from 27% in 1995 to 44% in 2013 (WTO, 2014). Since then matters have not improved much. As of end-2018, 78 WTO members (out of a total of 164) had not made the subsidy notifications that were due in 2017, 63 members had not made the notifications due in 2015 and 56 members had still to deliver their notifications due in 2013.⁵

The lack of comprehensive notifications to the WTO by members puts much of the burden of policy data collection on third parties. A very useful source of data on the use of trade-related policy instruments is the Global

2019). More generally the evidence suggests that SOEs are less profitable and less productive than private firms in their respective sectors (e.g., Kowalski et al. (2013) for a broad sample of countries).

⁴ See, e.g., Joint Statement on Trilateral Meeting of the Trade Ministers of the United States, Japan, and the European Union, 9 January 2019. At: <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2019/january/joint-statement-trilateral-meeting>.

⁵ See https://www.wto.org/english/news_e/news18_e/scm_26oct18_e.htm. Collins and Wolfe (2010) and Karlas and Parizek (2019a) discuss the state of play in the WTO in this area.

Trade Alert (GTA).⁶ While GTA data only start in 2009 and are therefore skewed by the fact that policies responded to the financial crisis—we cannot compare post-2009 trends to the “baseline” use of different types of policies before the crisis – it provides valuable information on the relative intensity of use of different policies. As of end-2018, some 18,000 trade-related measures were included in the database, ranging from tariffs and quotas to antidumping and investment measures (policies affecting the ability of and/or cost for foreign firms to establish or maintain a commercial presence in a country). Of these, three-quarters were trade distorting and one quarter reflected actions to liberalize trade. The number of trade-distorting measures imposed each year between 2009 and 2018 has been relatively stable, averaging some 1,350 measures per year. Governments were more active in removing trade barriers (implementing liberalization) in the years following the crisis. Since 2016, the number of liberalization measures demonstrate a declining trend. Tariffs and contingent protection (“trade remedies” or “temporary barriers to trade”) accounted for 16.5 and 13.4 percent, respectively, of all measures classified as harmful by the GTA team that were implemented between 2009 and 2018. By far the largest share of trade-distorting measures took the form of subsidies to production or measures to support exports (Figure 1).

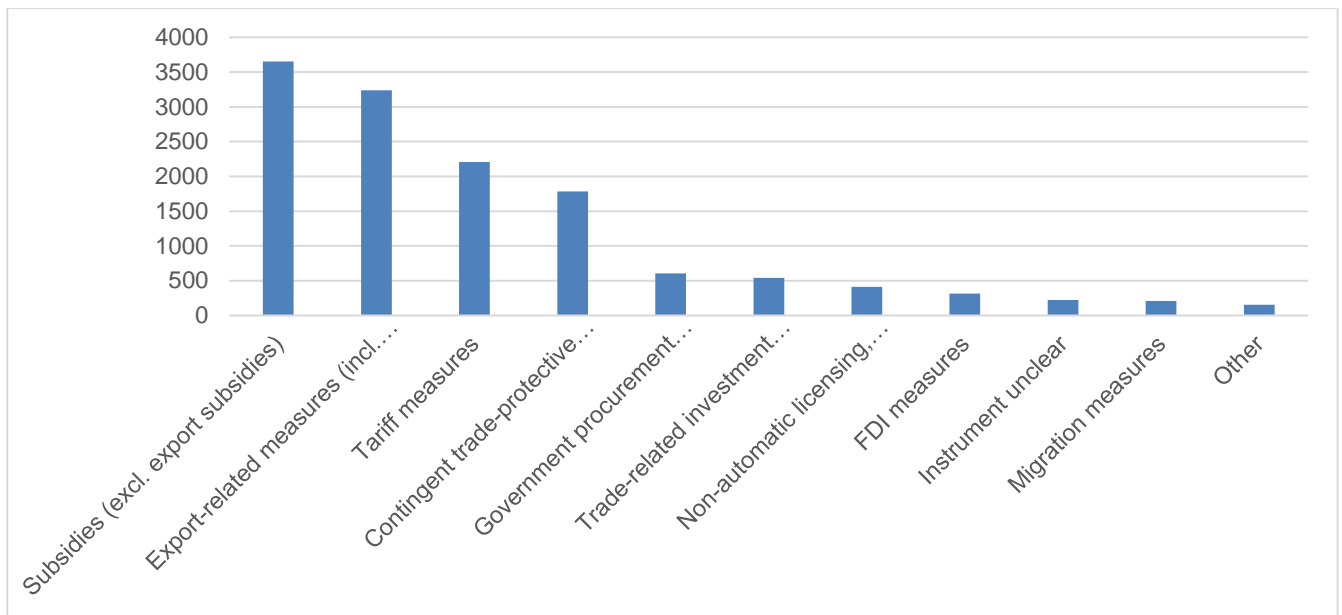
The GTA distinguishes several subsidy categories, including state aid/production support and export support measures (including tax rebates and concessions). The most frequently observed firm-specific state aid measures are public sector loans or loan guarantees and tax or social insurance relief. Taken together, subsidies accounted for 52 percent of all trade-related measures implemented between 2009 and the end of 2018 (some 6,900 measures).⁷ The G7 group of industrialized countries accounts for the greatest share of subsidies granted, while large emerging markets tend to implement more trade-related investment and price control measures (Evenett, 2019). Subsidies account for a much smaller share of total measures imposed by low-income developing countries. Insofar as subsidies are observed, they tend to target exports, suggesting a policy focus on promoting exports as opposed to protectionism (Hoekman, 2016a).⁸

Figure 2 breaks down the use of measures depending on whether they target goods, services or investment. In the case of measures targeting trade in goods, the GTA database reveals that governments use tariffs actively, but this reflects a mix of protectionism and liberalization. Over the 2009-18 period, the countries included in the dataset implemented more liberalizing actions than protectionist ones: more tariffs were lowered than were increased (first panel of Figure 2). A similar pattern applies for quantitative restrictions and non-automatic licensing requirements: the number of instances of removal of such measures slightly exceeds the total number of measures imposed over the decade. In contrast, trade defense measures tend to persist. The same applies to subsidy instruments.

⁶ The GTA website is at <http://www.globaltradealert.org/>.

⁷ Note again that the focus here is on a simple ‘count’ of measures, not on the value of the support granted or their effects. Given that state aid/subsidies often are substantial in value terms, the implied share of subsidies vs. other policies may be a downward biased measure of the economic significance of such instruments.

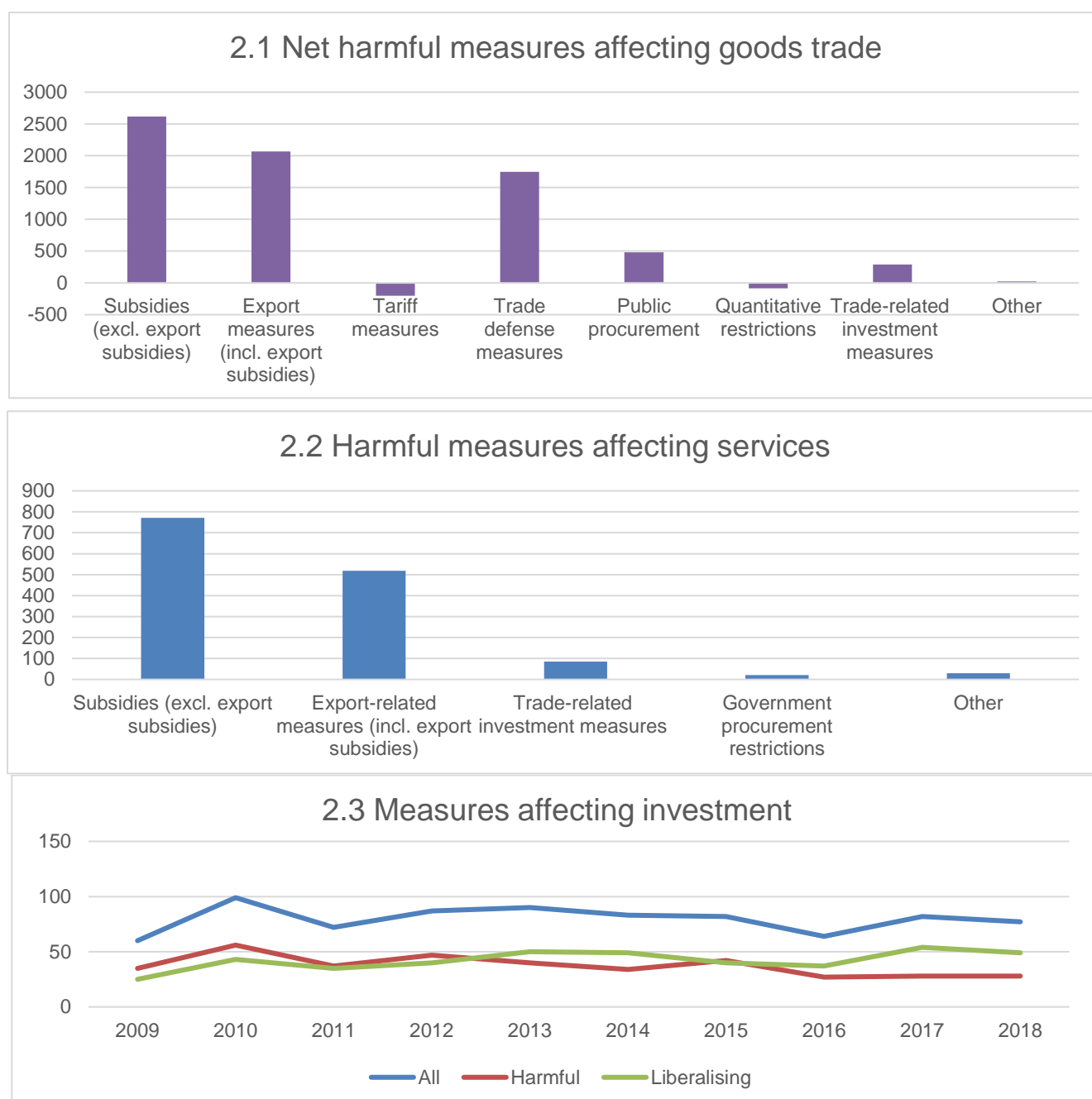
⁸ The WTO prohibits export subsidies, except in the case of agriculture, subject to specific commitments laid out in the Agreement on Agriculture, and in the case of developing countries with a per capita income of less than US\$ 1,000. The observed pattern of export subsidy use post-2008 may in part reflect the greater leeway for low-income countries to use export subsidies.

Figure 1: Use of Policy Instruments (Total 2009-2018)

Source: GTA website.

Because it is difficult to subject services trade to import tariffs or temporary trade restrictions like antidumping (except indirectly), it is not surprising that subsidies and other “non-border” measures are used relatively more intensively for services. For the sample as a whole, subsidies account for almost all measures pertaining to services (second panel of Figure 2).⁹ Investment measures are the third most frequently observed measure affecting trade in services. The GTA data indicate that high-income countries make the most intensive use of subsidies, whereas lower-income countries rely relatively more on investment measures. Overall, countries appear to pursue a policy of encouraging FDI—since 2012, the number of liberalizing measures has been greater than the number of harmful measures (third panel of Figure 2). Investment measures taken by lower income developing countries tend to be more weighted towards reducing discrimination against foreign firms; in OECD countries and upper middle-income nations there is rough balance between liberalizing and more discrimination. Evenett and Fritz (2018) note that in 2018 the number of restrictive investment measures, mostly taking the form of local content requirements, increased significantly.

⁹ In interpreting these data it should be recognized that services account for only a small share of total measures covered by the GTA database. The main focus of trade policy is on goods.

Figure 2: Measures affecting goods, services and investment, 2009-18

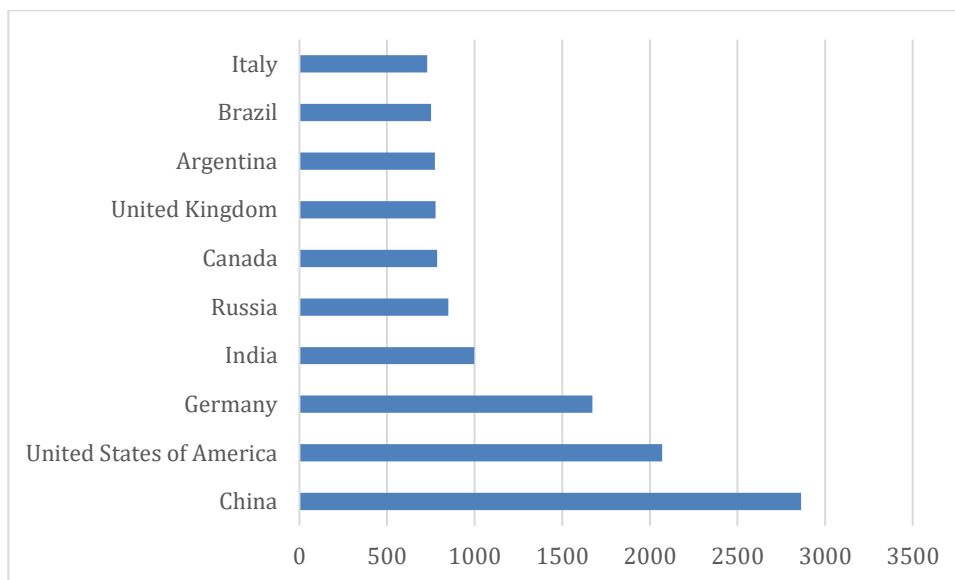
Source: GTA website (accessed March 6, 2019).

The United States is the “market leader” measured by number of new trade-distorting measures implemented during the 2009-18 period, followed by Germany and India (Figure 3). In the case of the US and India, this mostly reflects traditional border protection (tariffs, trade defense measures), while in the case of Germany export support measures play a big role (export credit; trade finance-related policies).¹⁰ China is generally a major focus of targeted measures. In many G20 countries, a high share of total imports from China are subject to trade barriers or affected by discriminatory policies (Figure 4). As noted by Bown (2019, this volume) China is the number one

¹⁰ Dawar (2019; 2020) discusses the (very limited) data available needed to form a judgement whether and to what extent export credit measures go beyond what is permitted under the OECD Export Credit Arrangement, noting that a major difficulty in this regard is that the Arrangement permits OECD export support agencies to “meet the competition” from non-signatory EXIM bodies, and the fact that the WTO rules in this area embody a carve-out for countries that have signed the OECD Arrangement.

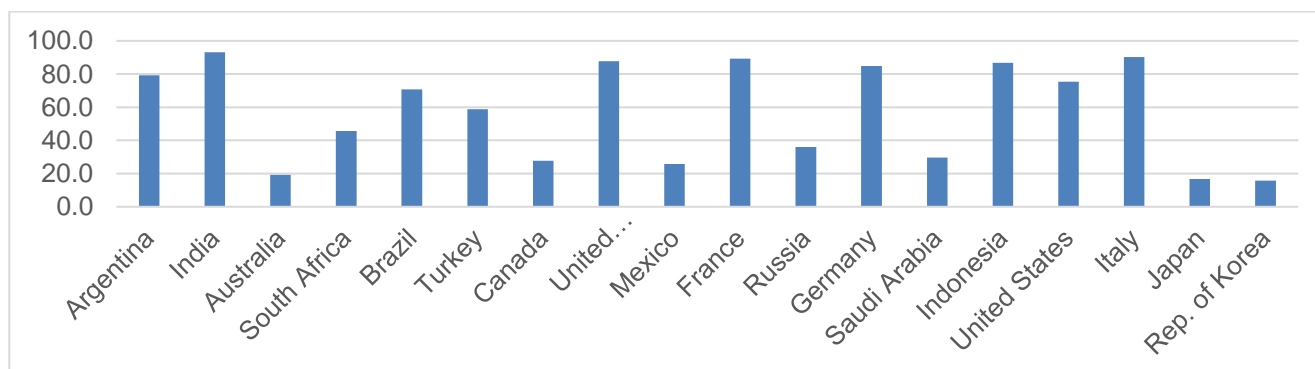
target, reflecting efforts to manage Chinese competition and perceptions that “China Inc.” (Wu, 2016) engages in unfair competition and trade-distorting practices.

Figure 3: New harmful measures imposed by country (total, 2009-2019)



Source: Global Trade Alert (Feb. 29, 2020).

Figure 4: Share of Chinese exports subject to discriminatory trade policies (%)



Note: Data on the share of trade affected by a given intervention are adjusted by the number of days that the intervention has been in force. Data encompass the 2009-2018 period.

Source: Evenett and Fritz (2019; p. 38, Table 7.1).

2 Motivation for Subsidies

Subsidies may be motivated by economic or non-economic goals. Economic goals include offsetting market failures (enhancing efficiency of resource allocation), inducing investment, shifting profits or rents, or redistributing income to disadvantaged communities or politically well-connected individuals or groups. A basic efficiency rationale for tax-subsidy schemes is to bring marginal private costs or benefits into alignment with marginal social costs or benefits. The need for this arises when externalities (market failures) cause social and private costs and benefits to diverge, so that private agents are not given an incentive to take into account the costs or benefits of their actions on others in the economy. Necessary conditions for a more efficient allocation of resources to result from intervention are that the market failures are diagnosed correctly and the policy addresses it.

Any policy that has differential effects across sectors or activities will act as a tax or subsidy. Some policies that are sector specific may have an economy-wide objective. Examples include subsidies to sectors such as health, education, transportation, and communications. Conversely, policies that are economy-wide in scope may effectively be industry-specific, for example, the pursuit of an environmental objective where the incidence of a measure is primarily on an activity that is associated with specific sectors. Many of the subsidy measures pursued by governments come under the heading of industrial policy. The traditional rationale for supporting an industry or productive activity has not changed for centuries. The premise of “infant industry support” is that the candidate industry is a positive net present value (NPV) industry, but the normal operation of the market will not support the establishment of the industry. A limited period of policy intervention can then create conditions conducive to the industry’s establishment. Two tests need to be satisfied for an activity to have positive NPV: the Mill test, which requires *private* positive NPV and the Bastable test, which requires *social* positive NPV – i.e., the costs of protection to society and any social benefits not captured in prices need to be taken into account when calculating profits. Any activity that passes the positive NPV test taking into account both social and private costs must be profitable, raising the classic question why the market does not invest in it, i.e., what is the market failure? Proponents of industrial policy are rarely explicit about the source of market failure, but the details of the market failure are essential to identify the optimal form and level of intervention. The usual claims are that there are capital market failures and dynamic externalities (e.g. linkages of some kind). These are arguments for *temporary* intervention. Baldwin (1969) pointed out that any market failure must be correctable with a finite period of intervention.

Thinking about the rationale for industrial policy has moved from an approach based largely on product market interventions (production subsidies, state ownership, tariff protection) to market failure-correcting taxes and subsidies operating mainly on factor markets (R&D incentives, training subsidies, investment allowances, easing access to finance) and a focus on “interventions that help build systems, create networks, develop institutions and align strategic priorities” (Warwick, 2013).¹¹ Aghion et al. (2011) make a strong case for growth-enhancing sectoral policies that are competition and innovation-friendly and that aim at internalizing knowledge spillovers. They note that long-standing arguments for industrial policy continue to be valid —such as credit constraints that result in inadequate capital being allocated to high growth potential activities given that high-tech firms and start-ups often have limited assets and thus limited collateral to use to get loans. They also argue that the potential for capture and “white elephants” is reduced if industrial policy intervention and state aid is decentralized and targets firms located in different regions as well as sectors where there is more intra-sector competition, as this enhances the probability of a positive effect of sectoral state aid on export and innovation performance. In principle, such a policy should not differentiate between firms on the basis of their nationality.

Standard economic frameworks for considering the rationale for government intervention continue to apply in a GVC world. Horizontal measures – a supportive business environment; investment in skills (education) and infrastructure; rule of law and protection of property; safeguarding competition – arguably become even more

¹¹ This observation is increasingly perceived not to apply to China, given recent trends towards growth in the size and market share of SOEs in the economy.

important. In a world of extensive value chain trade, firms must face a stable economic, legal and political environment. At the same time there may be need for *specific* intervention to deal with coordination failures and information asymmetries. Interventions that expand the ability of a country to contribute to GVCs may have not only positive local spillover effects but improve the competitiveness of a GVC as a whole. This may be associated with positive as well as negative cross-border spillovers (Van Biesebroeck, 2009; Blanchard, 2015).¹² The direction and size (distribution) of spillover effects will depend on linkages across countries *within* a GVC and linkages *across* chains—reflecting activities that may use the same type of inputs or demand similar products (Baldwin and Venables, 2015).

Developed countries are primarily seeking to dominate frontier sectors. This will generally involve access to highly skilled labor, protection of intellectual property. In old-time development theory (“big push”) the emphasis was on locational externalities in production. In a GVC context locational externalities have more to do with creating environments attracting and retaining skilled workers and, the skill-intensive part of value chains (Moretti 2012). Thus, subsidies to education (especially in sciences, engineering, technology) and to R&D and liberal immigration rules, especially for students and skilled workers, may play a role. Developing countries, by contrast, are seeking to connect with GVCs and “move up” the value chain through policies that support employment and upgrading their position in the value chain. Some of this will depend on efficient communication, transport and logistics services and networks.

Policies that support (subsidize) local production of intermediate inputs can help attract value chain-motivated FDI, with the impact on GVC participation depending on the range of available input production capabilities in the host country (Baldwin and Venables, 2015). Reliable and low transactions costs for access to inputs and getting processed/final products into export markets is critical in a GVC world. While investment incentives are a potential instrument governments can use to offset specific locational or operating disadvantages, trade policy matters importantly as well. Kimmitt and Slaughter (2015), for example, note that the limited number of trade agreements negotiated by the US meant that Audi set up a plant in Mexico instead of Tennessee, in part because Mexico offered a location that had duty-free access to some 40 countries with which it had trade agreements.

A key finding of research on strategic use of trade policy in the 1980s and 1990s is that governments can easily get policy wrong and reduce welfare. This applies equally to policy in a GVC world. For example, Bloningen (2016) examines the impact of policies to support local steel production on the export competitiveness of downstream manufacturing sectors that are significant users of steel. He finds that a one standard deviation increase in the use of export subsidies and non-tariff barriers leads to a 3.6 percent decline in export competitiveness for an average downstream manufacturing sector. But this negative effect can be as high as a 50 percent decline for sectors that use steel as an input most intensively. Conversely, policies that target downstream activities may be to the detriment of upstream suppliers, especially if the former have market (monopsony) power (Van Biesebroeck and Sturgeon, 2013).

Cross-border spillovers

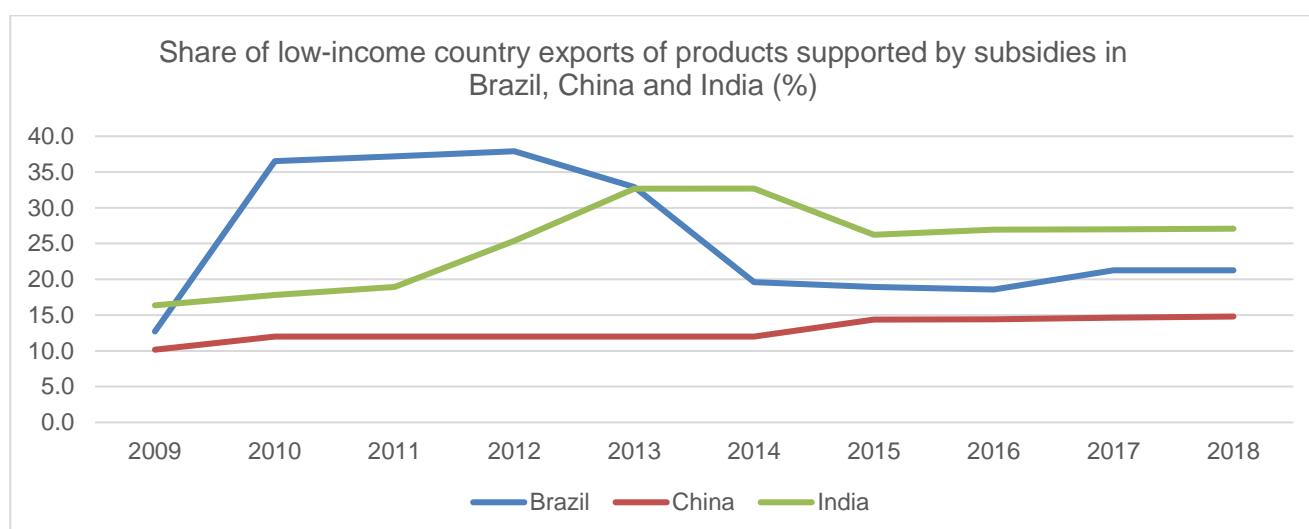
Abstracting from the important question of the domestic welfare effects of government policies, from a global perspective what matters is the sign and size of associated international spillovers. These may be dynamic as well as static if national policies have longer term (anti-competitive effects on global markets. The extent of spillovers and their incidence is an empirical question that calls for analysis. Such analysis is pertinent for all countries and should consider the policies of all major countries.

¹² McGuire (2014) documents how some countries have used selective government intervention to help national firms accumulate the necessary expertise and experience needed to build a niche in specific segments of the international global aerospace value chain, based in part on collaboration with global players in the industry.

An interesting implication of the differentiation in interests created by GVCs is that negative policy spillovers are likely to be between similar countries. Developed countries will have the same interest in frontier sectors and pursue policies with the same goals. While these will be negative for other high-income countries, by strengthening value chains these policies may benefit developing countries that participate in them. Developing countries at similar levels of development will have similar interests and pursue policies with the same goals. These may generate negative spillovers for similarly situated developing countries, but the industrial policy competition will benefit (parts of) GVCs located in developed countries. This pattern of interests has implications for the institutions used to manage spillovers and the rule structures involved in such management.

Investment incentive competition between jurisdictions can lower overall welfare. Ossa (2017) provides an illustration, analyzing the effects of investment-related tax/subsidy incentives at the state-level in the United States (US). US states “spend” some US\$80 billion a year on tax incentives and subsidies to investment, reflecting a vigorous competition to attract investment. Ossa finds that this competition increases state-level welfare (by attracting firms, increasing employment, and raising wages) but generates beggar-thy-neighbor effects. While there are large potential gains at the state level from subsidizing investment, this distorts resource allocation by making intermediate inputs too cheap and generating excessive entry. There is a significant cost to the US as a whole—if states were to cooperate and refrain from competing for investment, manufacturing real income in the US would be 3.9 percent higher.

Figure 5: Potential negative spillover effects of subsidies on low-income exports



Source: GTA database.

Most assessments of the potential spillover effects on developing countries of foreign policies have tended to focus on measures implemented by the EU and the US. With the emergence of large emerging economies as major actors such assessments need to include these countries as well. Figure 5 plots the post-2009 trend in the share of products exported by a group of low-income countries that benefit from subsidies in Brazil, China and India.¹³ This share is substantial, ranging between 10 and 25 percent. It is also volatile for Brazil and India, as these interventions presumably in part reflect responses to macro-economic conditions (the aftermath of the 2008 financial crisis). The overall share of potentially affected exports of the selected low-income countries is 65 percent higher in 2018 for Brazil and India than it was in 2008 (before the crisis). Insofar as the rise in the spillover incidence of subsidies reflects a fiscal response to the macro shock, there seems to be a ratchet effect as well.

¹³ The affected countries comprise Afghanistan, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, DPR Korea, DR Congo, Eritrea, Ethiopia, Gambia, Guinea, Haiti, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Niger, Rwanda, Senegal, Sierra Leone, Somalia, Syria, Tajikistan, Tanzania, Togo, Uganda, Yemen, and Zimbabwe.

This may be because other policy objectives are in play or because governments confront constraints in removing subsidies once implemented.

The basic point is that greater consideration should be given to monitoring and assessing the use and incidence of trade distorting measures and their possible negative spillover effects. Such efforts need to consider implications for – and operation of – GVCs as these involve firms and plants in many countries.

3 Gaps in WTO Rules

Many policies can act to promote an economic activity. Any measure by a government to disadvantage one activity relative to another will have the effect of advantaging the latter. It is therefore necessary to recognize that if one seeks to discipline policies that give rise to negative international spillovers, the focus of attention must be on effects as opposed to narrowly defined policy instruments. In the WTO context, the focus is on discrimination – domestic policies (subsidies, taxes, administrative or regulatory measures) that skew incentives for domestic agents to source locally. Often the instruments used to do this are tax-related and frequently take the form of tax exemptions or rebates that are conditional on local content.

Art. III of the GATT requires that domestic policies satisfy the national treatment principle: this implies that behind-the-border regulatory measures must apply equally to domestic and foreign goods. If this principle is violated, there is a *de facto* illegal subsidy. This broad notion of subsidy includes financial support: measures that impose a direct burden on the budget, are specific to an activity (as opposed to benefitting economic activity more generally), and convey a benefit to those targeted. The focus of WTO rules is on potential trade effects, i.e., adverse effects on foreign products. A distinction is made between specific and general subsidies. Only the former are actionable. Specific subsidies include direct financial support for exports and local content requirements and other policies that reduce incentives to import.

Historically, the center of attention for WTO members has been agriculture, reflecting the extensive support provided by many high-income countries to this sector. The Uruguay Round significantly reduced the ability of members to use agricultural subsidies and encouraged governments to decouple support from production. More recently (in 2015), WTO members agreed to a ban on agricultural export subsidies. Compared to the early 2000s, there has been a remarkable reduction in trade-distorting production support in high-income countries, illustrating the value and feasibility of cooperation to reduce the negative spillovers created by subsidies.¹⁴ Welfare considerations enter only implicitly into WTO rule making. Thus, the preference for income support (assistance decoupled from production) and carving out such support through a “green box” of permitted subsidies was not because of recognition of *national* welfare implications, but because of the presumed lack of trade distortions associated with such support.

The main WTO instrument regulating use of subsidies and actions by members to offset the competitive (trade) effects of foreign subsidies is the Agreement on Subsidies and Countervailing Measures (ASCM). This pertains only to goods – there are no disciplines on subsidies for services in the GATS. The ASCM has a two-fold objective. First, to prevent the use of subsidies by members to circumvent negotiated market access (tariff) concessions. Second, to regulate countervailing duties (CVDs) used to offset the adverse effects of foreign subsidization of goods on domestic producers.¹⁵ Export subsidies are prohibited, but the WTO does not regulate

¹⁴ As of 2016 the trend towards decoupling appears to have stalled (OECD 2019a).

¹⁵ Adverse effects include injury to a domestic industry, nullification or impairment of tariff concessions, or serious prejudice to the country's interests. Serious prejudice is defined to exist if the total *ad valorem* subsidization of a product exceeds 5 percent; subsidies are used to cover operating losses of a firm or industry; or debt relief is granted for government-held liabilities. Serious prejudice may arise if the subsidy reduces exports of WTO Members, results in significant price undercutting, or increases the world market share of the subsidizing country in a primary product. The focus of WTO disciplines in cases of prejudice is on the amount of the assistance given, not on the extent to which a subsidy harms trading partners.

domestic subsidies per se (Horlick and Clarke, 2010). Subsidies other than export subsidies can be used but can lead to the imposition of countervailing duties in destination markets.¹⁶ The WTO rules are not concerned with why a government has implemented a subsidy, e.g., whether this can be justified by a market failure.¹⁷ Another important dimension of the rules is that remedies are retrospective – there is no scope to claim private damages. As noted in the Introduction, rising concerns about subsidies are correlated with the increasing weight of SOEs in the world economy. SOEs may be a source of subsidies for downstream firms and industries they supply as well as a potential source of concern for competition on markets in themselves. The WTO is not concerned whether a country has SOEs but focuses on whether SOEs engaging in trade (“state-trading enterprises” – STEs) operate on a commercial basis and prohibits discrimination by STEs. GATT Art XVII (on STEs) only requires firms granted exclusive or special trade privileges to abide by the nondiscrimination rules. Recent preferential trade agreements have gone further than the WTO in agreeing to disciplines on SOEs and offer insight into what participating countries presumably would like to see incorporated into the WTO.¹⁸

The WTO disciplines were crafted in the 1980s, before the rise of GVCs, the growth of China and the emergence of the digital economy.¹⁹ WTO subsidy-related rules are premised on trade comprising goods that are produced in one country and consumed in another, and implicitly assume that most of the value added embodied in a product is generated by domestic factors of production. This is not the case today, making it less clear who benefits from a subsidy. Is the benefit associated with a GVC as a whole and the impact reflected in the price of the final good? Or is the impact on specific segments of a GVC? Who captures the benefit? In any assessment of such questions the first order of business is to identify and define the spillovers that are of concern.

The exclusive focus on trade effects in WTO rules is arguably a downside of the status quo. One reason is that the rules do not cover investment incentives and related policies that are not conditional on local sourcing, i.e., that conform to the national treatment principle. Another weakness is that what constitutes a subsidy is unclear. The major example that has arisen in the WTO case law is whether an SOE is a ‘public body’. Another gap is the treatment of input subsidies. For example, the tax regime can be used to lower domestic prices of inputs used for domestic or export production. Yet another issue concerns the incentives for firms to petition for action to offset the effects of subsidies. Firms may not be willing to claim injury or adverse effects if they consider the overall balance of all the policies they benefit from, including in both the target country of a complaint and in third countries that contribute to or are part of their operations. Of course, from an economic perspective this is not a problem. The prospective nature of WTO remedies and absence of compensation for (private) damages is likely to further reduce the incentives for large firms (multinationals) to petition for cases to be initiated in the WTO by their governments or to be willing (indeed, perhaps able) to document that they have been injured. Indeed, it may not be

¹⁶ De minimis provisions allow developing countries to use subsidies subject to certain thresholds. If the subsidy is less than two percent of the per unit value of products exported, developing countries are exempt from CVDs (for LDCs the threshold is three percent). De minimis also applies if the import market share of a developing country is below four percent, and the aggregate share of all developing countries is below nine percent of total imports. The ASCM exempts nations with per capita incomes below US\$1,000 from the WTO prohibition on the use of export subsidies and precludes CVDs on associated exports if global market shares are less than 3.5 percent for a product. De minimis provisions are also included in the WTO Agreement on Agriculture, permitting support up to 10 percent of output in developing countries.

¹⁷ In the Uruguay Round a third category, non-actionable subsidies, was included in the ASCM spanning environmental, R&D, and regional subsidies. This provision was time bound and lapsed at the end of 1999 because consensus could not be obtained to extend it. As a result, countries are left with GATT Art. XX, the general exceptions article, under which a WTO member can argue that a measure is necessary to restrict goods made with prison labor or, inter alia to protect human, animal or plant life or health or conserve exhaustible natural resources. Art. XX was drafted in the 1940s and does not adequately cover many of the market failures that may justify policy interventions.

¹⁸ Disciplines on SOEs are included in recent PTAs such as the CPTPP and the USMCA, and the relevant provisions are enforceable through dispute settlement procedures. These disciplines require that SOEs make purchases and sales on the basis of commercial considerations; specify that subsidies granted to SOEs, both direct fiscal transfers and indirect subsidies, are actionable and that signatories may not discriminate in favor of SOEs (i.e., they must apply the national treatment principle). The agreements also include provisions requiring signatories to list their SOEs and publish data on measures used to assist them.

¹⁹ This and the following paragraphs draw on Hoekman (2016a).

clear in practice which country a multinational “belongs to” and thus which government to petition. The government-to-government nature of the WTO is in this respect is another potentially constraining feature of the extant system that needs to be taken into account in re-assessing its salience.

Policy cooperation is harder to design in a GVC world, given that the distributional effects and the efficiency (efficacy) of interventions are more difficult to determine *ex ante* and the potential greater scope/need for targeted interventions to address coordination failures that may affect local participation in GVC activities. In the GATT the focus is on the domestic industry—as long as a sufficiently large share of the industry is in agreement that they are being injured by a foreign subsidy, action can be initiated. It has always been recognized that taking action—imposing a CVD—will be detrimental to consumers and downstream users. But in a GVC world a CVD may have no effect on the firms that bring an anti-subsidy case for import protection. GVCs embody complex relationships between the links in the chain/nodes of the network to ensure reliability of supply, quality, interconnection, and so on. Domestic input suppliers may not benefit from CVDs on imported inputs that are processed locally and re-exported. The CVD is unlikely to induce a lead firm to switch its sourcing to the local firms that bring a case – instead the firm may simply move the affected part of the chain elsewhere if the CVD raises costs too much.

Moreover, firms that participate in the value chain(s) will oppose CVD petitions. As noted by Hoekman and Messerlin (2000) the political economy of trade policy reflects the balance of interests of firms depending on where they are located in the supply chain: users of inputs have incentives to lobby for measures that reduce their input costs. From an FDI-attraction perspective, permitting firms to launch CVD actions is likely to run counter to investment-promotion objectives and have detrimental impacts on the reputation of a country as a platform for GVC-based activity.

Incentives to attract investment are not covered by WTO rules. The focus of WTO subsidy rules is on whether interventions are export subsidies, or cause adverse effects for exporters in third markets or domestic import-competing producers. But if the main goal and effect of GVC participation-related policies is to attract or retain FDI, the issue becomes one of investment diversion and global efficiency – cooperation aimed at preventing inefficient competition between jurisdictions that simply generates rent transfers to investors as opposed to addressing a market failure. An implication of the centrality of FDI and more generally the importance of investment for GVC-related policy interventions is that discrimination may be less of a feature of policy so that national treatment is less of a constraint. Investors will operate plants that generate local employment, independent of nationality of ownership. The spillovers that may arise are therefore somewhat different from the mercantilist motivation for many WTO rules—a concern about effects of policy on exporters. If the issue is investment incentives, effects are not (only) on exporters but on locations for investment, that is, the potential problem is investment diversion. Non-discriminatory investment policies may be distorting by attracting investment to less efficient locations at the cost of other jurisdictions, generating non-trade spillovers the WTO cannot address because the rules do not cover such policies.

Negotiating disciplines on investment policies is likely to be a very difficult exercise. One reason is politics: investment incentives are a favored tool of local governments. Another is the complexity of determining the distributional effects of interventions, which will center in part on identifying the counterfactual: what would have happened in the absence of a policy mix that led to an investment going to one location as opposed to somewhere else? In the WTO working group on investment (one of the so-called Singapore issues), it became clear early on that many (most?) governments were not willing to discuss investment incentives/subsidies, removing much of the potential rationale for a multilateral agreement (Hoekman and Saggi, 2000). Moreover, the high import content of many GVCs means investment subsidies will benefit some foreign interests as well as local ones, reducing incentives to negotiate disciplines. Account also needs to be taken of the role played by services as inputs. If services benefit from government support, the indirect subsidies may dominate the net treatment of final products. On average, services account for one-third or more of the value of goods) (WTO, 2019).

4 Bolstering Disciplines for Subsidies and SOEs: Pathways Forward

In considering how to update multilateral rules on subsidies and SOEs more attention should be given to the aims and effects of subsidies and enabling the use of subsidy instruments to address market failures. A basic need is to determine to what extent “gaps” in existing rules can lead to systemic negative spillovers. Coherence calls for such an effort to cut across existing GATT-GATS-sectoral silos and take a more competition-policy informed perspective, as opposed to a narrow legal focus on discrimination (national treatment), specificity and (re-)defining the definition of an actionable subsidy. There are lessons to be learned from the EU experience in this regard, where disciplines on state aid and SOEs are linked to competition policy and center on assessing/limiting the potential distortions to competition arising from government intervention.

A key input into any deliberation on rules of the road should be better data on the policies used by central and sub-central levels of government around the world – not just China. The GTA data discussed above suggest there is a lot of action, but what matters is to determine which of the many measures move the needle most. What creates large spillovers? What does not? What types of intervention are a serious problem from a global welfare perspective? Answering these questions requires a shift in mindset – away from closed-door discussions between like-minded countries (such as the trilateral talks between the EU, Japan and the US) towards an open process of deliberation based on evidence and analysis of effects. Such a process should encompass relevant entities in and outside governments that are concerned with implementing and/or monitoring subsidy programs. Tax and subsidy-related policy instruments fall under the purview of Finance and Economy ministries and executing agencies – generally sectoral line ministries and regional/municipal public bodies. An implication is that fora to identify, measure, assess and address the cross-border effects of tax/subsidy measures should go beyond trade ministries and those charged with implementing trade policy.

In contrast to other areas of trade-related policy such as trade facilitation, intellectual property protection, sanitary and phytosanitary measures and product safety standards, there is no epistemic community (Haas, 1992) focused on subsidies.²⁰ Many government agencies and international organizations are involved in the design and implementation of such policy instruments, with many professionals (primarily lawyers and economists) working on subsidy related matters, but there is international forum that brings these “stakeholders” together. Relevant players include national Ministries of Finance; national competition agencies (and in the EU, DG Competition in the European Commission), specialized agencies (e.g., the Australian Productivity Commission) and international organizations, notably the IMF and the OECD, but also sectoral organizations. Mobilizing an epistemic community that connects across these “silos” to focus on measuring support and determining the spillover effects of subsidies could do much to prepare the ground for deeper cooperation in this area. This could start with agreeing on what types of data are already being collected, what more is needed, and foster the information sharing necessary to build trust. Considering the use of indicators can help legitimate the overall program, as was done for agriculture by the OECD (the Producer Support Estimates).

Such efforts will need an institutional anchor. The WTO is the obvious candidate although in the current environment it seems unlikely that the membership will be able to agree to give such a mandate to the organization. Alternative fora that might be considered as possible focal points include the G20 (working through the Trade and

²⁰ See Hoekman (2016b) for a discussion of the epistemic community that underpinned the eventual successful negotiation of the 2013 WTO Agreement on Trade Facilitation.

Investment Working Group)²¹ or the International Competition Network (ICN), an informal grouping of agencies that cooperate in areas of competition policy.²²

To some extent, the major players in the global trading system have already taken initiatives that cut across silos in government and leverage the analytical capacity and knowledge base of international organizations to address subsidy-related concerns. A prominent example is the G20 Global Forum on Steel Excess Capacity,²³ an initiative established at the 2016 G20 summit in China. The mandate of this forum, facilitated by the OECD, included producing and sharing reliable statistics on production, capacity and excess capacity across major steel producers, and identifying measures to reduce global production. Assessing the role of subsidies in generating overcapacity was part of the forum's terms of reference. The forum provided a platform for the exchange of data on steel capacity, subsidies and other support measures, thus improving the information base and the transparency of the relevant policies implemented by major steel producing countries. The forum reported to G20 Ministers annually during 2017-2019 and met at least three times a year during this period.²⁴

Some of the elements for making progress are already embodied in different WTO agreements. These include the so-called green box approach used in the Agreement on Agriculture, which exempts subsidies that cause minimal distortion, understood to include programs such as direct income supports for farmers that are decoupled from production levels or prices, environmental protection and regional development programs. The Agreement also allows developing countries additional flexibilities in providing domestic support.²⁵ The various *de minimis* provisions included in these WTO agreements for developing countries are a way of recognizing that the spillover effects created by subsidies used by low-income countries are likely to be small from a systemic perspective. The 'green box' approach in the Agreement on Agriculture and included on a provisional basis in the ASCM (and that expired in 1999) illustrate the possibility of balancing stronger disciplines on subsidies with a recognition that some types of subsidies are unlikely to affect trade. Going beyond this to recognize that some subsidies may have an important function in addressing market failures and launching a concerted effort to improve information on tax/subsidy policies targeting investment in industrial and service sector activities arguably are necessary conditions for making progress in additional rule making.

Many WTO members have emphasized the need for better information on subsidies. The recent focus in the WTO by the US, EU and others on the problem created by inadequate notification has made clear this is a problem. However, the suggested remedies – addressing the notification deficit by imposing stronger penalties for late or incomplete reporting by members – is unlikely to do much to improve matters. More effective would be to create positive incentives for greater transparency by governments (Wolfe, 2017; Wolfe, 2018). Sharing experiences on the payoffs from a national governance perspective of compiling better information; provision of technical assistance and identification of good practices; using web-scraping techniques to collect data on policies from government websites and public reporting by companies and the specialized press (a source of information used by the GTA); and leveraging extant data collection efforts by ministries of finance would do much to fill the gaps.

²¹ The G20 Trade and Investment Working Group (TIWG) was created in 2015 as a forum to prepare the ground for trade initiatives by G20 members. It includes the main international organizations, i.e., the IMF, OECD, World Bank, International Trade Centre, UNCTAD and the WTO. The TIWG provides a forum for coordination of the activities of the organizations in areas defined by G20 members. Activities of the TIWG have centered on the importance of reducing trade costs for global value chains; policies to address adjustment costs of globalization; and investment facilitation. Work orchestrated by the TIWG helped prepare the ground for the launch of plurilateral discussions on e-commerce and investment facilitation in the WTO.

²² The ICN was formed in 2001 by national competition agencies in part as a consequence of the effort to launch negotiations on competition policy in the WTO in the early 2000s. See Kovacic and Hollman (2011).

²³ See, e.g., <http://www.g20.utoronto.ca/2018/global-forum-on-steel-excess-capacity-180920.pdf> and https://www.meti.go.jp/english/press/2019/1026_001.html. For an economic analysis of subsidies and excess capacity, see Bloningen and Wilson (2010).

²⁴ The forum allowed participants to identify the underlying causes of steel overcapacity and define concrete actions to address them. See <https://trade.ec.europa.eu/doclib/press/index.cfm?id=2077>.

²⁵ See https://www.wto.org/english/tratop_e/agric_e/agboxes_e.htm

Given the incentive problems associated with reliance on firms to report perceived problem policies and document their effects, options that rely on other actors – including other international organizations – are more likely to be effective.

A successful example of the type of approach needed is the long-standing effort that commenced in the late 1970s to measure the extent and effects of policies supporting the agricultural sector (see Legg and Blandford, 2019 and Wolfe 2020). This resulted in the development of summary indicators such as the Producer Support Estimate (PSE) that have become a core element of monitoring policy in this sector and acted as a focal point for policymakers to reflect on the overall magnitude and incidence of a broad array of policy measures used to support agriculture. Other, more recent, examples that are directly pertinent to the issue of industrial subsidies include the Global Steel Forum mentioned above and the OECD's detailed firm-level sector-specific study of the magnitude and incidence of subsidies along the aluminium supply chain (OECD, 2019c).²⁶

Data are necessary but not sufficient. Analysis of effects is as important. Ideally, such analysis would be provided by the WTO secretariat and provide a basis for discussion among members. The Trade Policy Review Mechanism provides a possible framework on which to build, as it is intended to inform periodic deliberations in the WTO on country-specific policies – with WTO Members with the largest shares of world trade being discussed more frequently (every 2 years) – as well as discussion that focuses on developments in the trading system more generally. The latter was something done in the GATT years and that was resuscitated after the 2008 financial crisis as a means of monitoring the use of policy responses by WTO members. A central feature of the TPR process is peer review – it is left for members to engage with each other on the basis of the factual report prepared by the secretariat. There is relatively active participation in the TPR process (Karlas and Parizek, 2019b). Such review would benefit from more analysis by the secretariat of the effects of policies, something which is precluded at present.

A core challenge in defining possible rules is to agree on what in principle constitutes desirable (globally welfare-enhancing) policies and what types of subsidies are more likely to generate undesirable spillover effects, based on empirical analysis and evidence. In thinking about moving forward, there may be lessons from the EU in ensuring a level playing field for firms on its integrated market. In the EU, subsidies are covered by EU competition policy disciplines. Four criteria apply for state aid to be illegal: (i) state resources (a subsidy or tax expenditure) lead to (ii) a selective advantage for a firm or activity that (iii) distorts competition and (iv) affects trade between Member States. These criteria apply to undertakings to which Member States have granted special or exclusive rights, i.e., SOEs. EU Member States must comply with transparency obligations for State aid allocations over €500,000, including the name of the beneficiary and the amount of aid granted.²⁷ This data compilation effort is complemented by evaluation of selected large State aid schemes to assess their impact and guide possible improvements in the design of programs as well as the subsidy rules.

A central feature of the EU approach to regulating subsidies is that measures falling under a General Block Exemption Regulation (GBER) are deemed to raise few or no concern in distorting competition on the EU market. These include regional aid (including for ports and airports), aid for SMEs, aid for R&D and innovation, broadband infrastructures, energy and the environment, employment and training, natural disasters, sports and culture. Agreeing to a set of subsidies that are deemed not to cause spillover concerns along the lines of what is done by the EU could help differentiate between subsidies that are not considered to have harmful trade spillover effects

²⁶ See OECD (2019b) for a short summary of information on government support and approaches used to collect such data.

²⁷ An annual State Aid Scoreboard (http://ec.europa.eu/competition/state_aid/scoreboard/index_en.html) collects data reported by Member States. It covers all existing aid measures to industries, services, agriculture and fisheries except for aid to railways and services of general economic interest. In 2017, Member States spent €116.2 billion, or 0.76% of total EU GDP, on State aid. Over 90 percent of total State aid was allocated to horizontal objectives of common interest, such as environmental protection, research, development and innovation and regional development.

and those that may have such consequences and should be actionable.²⁸ Following a 2012 reform, EU Member States are no longer required to notify State aid in advance to the Commission if the measures fall under the GEBR, leaving the Commission to focus on measures that are deemed of greater risk of distorting competition. In 2017, most new aid measures fell under the GBER. The quid pro quo for no longer having to notify ex ante is stronger controls at Member State level, greater transparency and better evaluation of the impact of state aid.

Competition policy informed approaches

A major feature of the “WTO approach” to subsidies (and more generally towards trade policies), is hard law, mercantilism (a focus on exports/market access) and reliance on self-interest of firms to complain to governments and request either CVDs or to raise the matter in the WTO. To effectively address the interface challenges posed by subsidies and related industrial policies, this focus arguably is too narrow. A more competition policy-based approach that is geared to competition considerations (competitive neutrality; contestability) as opposed to foreign market access is called for. This can draw on some of the basic concepts and approaches used in the EU, including agreement that some types of policies are prima facie “OK” (the block exemption or “green box” approach discussed above) and use of competitive neutrality principles to address concerns that state aids and SOEs may distort the operation of markets. Moving in this direction does not require a supranational body – a more competition-centric approach can be applied in an inter-governmental setting like the WTO.

The design and enforcement of competition law and policy is distinctive compared to trade law and policy in relying to a much greater extent on economic analysis. Recognizing the need to balance the potential market failure motivations for subsidies against the potential spillover effects on competition often will call for theoretically grounded empirical analysis. Simple heuristics or per se rules may be too blunt. Complementing “black letter” law approaches with a “law and economics” approach as in the implementation of competition policy could help WTO members by avoiding a head-on confrontation between countries with different economic systems – i.e., the “China Inc.” problem (Wu, 2016). An example is provided by current claims that Chinese SOEs engage in essentially predatory behavior: using their privileged status and access to capital and other resources to undercut the international competition. We know what conditions have to apply for such a strategy to be profitable – there must be high entry barriers or large dynamic economies of scale and learning that preclude firms from (re-)entering markets. The economic literature has found that SOEs are on average less productive and profitable (Kowalski et al. 2013; OECD, 2016; Harrison et al., 2019). Presumably insofar as there are significant subsidies allocated to SOEs these will not be permanent as this would be a recipe for recurring losses. In the long run these cannot be sustained. These types of considerations should enter into discussions on possible rules to address the potential negative effects of SOEs operating on global markets. We can note again that EU competition rules apply to SOEs. The EU does not care about ownership but about behavior. The same should apply in the WTO setting: we should care about constraining potential long-term anticompetitive effects. This cannot be done using the current rulebook, which is a major gap.

Another design element that arguably needs reconsideration concerns the entities that are expected (required) to challenge perceived anti-competitive practices. There may be a need to shift the burden away from firms and the associated focus on their trade interests as opposed to national or global welfare. There is a case for creating a mechanism through which matters of “systemic” import can be brought on behalf of the trading system. In the EU,

²⁸ The EU treaty includes a public services exception (Art. 106 TFEU) which specifies that undertakings “entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly” are subject to the competition rules of the Treaty “insofar as the application of such rules does not obstruct the performance . . . of the particular tasks assigned to them.” TFEU Art 107(3) lists measures that may be considered to be compatible with the internal market: (a) aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment....(b) aid to [...] to remedy a serious disturbance in the economy of a Member State; (c) aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest; (d) aid to promote culture and heritage conservation where such aid does not affect trading conditions and competition in the Union to an extent that is contrary to the common interest; (e) such other categories of aid as may be specified by decision of the Council on a proposal from the Commission.

the European Commission may act as an agent to defend the interests of the majority of the principals (member states) if one member takes actions that impede the operation of the single market. Given the sovereignty concerns of all WTO members and enormous heterogeneity across the 164 members there is no prospect of the WTO secretariat playing such a role, even on a limited scale. More feasible may be to agree on creation of processes to identify instances of large spillovers that are of systemic concern. Bolstering the Trade Policy Review (TPR) process is one possibility. Another is to relax the constraints imposed on the WTO secretariat to act as an agent of transparency (Mavroidis and Wolfe, 2015). Yet another would be to establish an “Ombudsman” type body that is mandated undertake and publish analytical assessments of the policies that have systemic impacts (Hoekman and Mavroidis, 2000). These possibilities may seem like a bridge too far, especially in an environment where geo-economic tensions are high, but the same was true when the TPR mechanism was first proposed in the Uruguay Round and when the FAO and the OECD commenced analytical work to measure the magnitude of support provided to agriculture. Incremental steps allowing learning by doing should be feasible with a minimum of good will – or a modicum of credible threats of dissolution of multilateral cooperation.

Conclusion

The global economy has become much more integrated in recent decades as a result of the political decision by China to adapt an outward-oriented development strategy, extensive trade and investment liberalization by numerous countries, and technological advances. The rise of GVCs is both a response to and driver of global integration. It has changed the policy mix used by many WTO members – not just China. Tariffs – notwithstanding Tariff Man Trump – are no longer an important policy tool. The emphasis today is on subsidies broadly construed. Policy cooperation has become more complex than in the 1980s, the last time WTO rules were re-considered, when trade involved less vertical specialization and the pattern of unbundling of production activities across many locations that prevails today.

The current trade conflicts and tensions illustrate the need to revisit the rules. This should start with bolstering transparency through a collective effort to collect and compile information on subsidies, going beyond reliance on notifications by countries, and to launch a process of dialogue and deliberation in the WTO to define a negotiating agenda. Better data on applied policies is important to help countries determine whether there are serious, systemic spillovers. Analysis centered on spillovers is needed to inform deliberation on addressing lacunae in the rules. Filling the information gap will require a shift in prioritization of the transparency and monitoring efforts of international organizations, not just the WTO, and a concerted effort to map the nontariff measures that are used by governments to affect/target investment and economic activities in their jurisdictions.

When it comes to rule-making efforts the basic question should be: what generates major systemic spillovers? Determining the answer implies also identifying policies that are (should be) of less concern. The traffic light/green box approach is already an element of the WTO rules for agricultural policies. Extending this by building on the example of block exemptions coupled to/with notification would seem to be a reasonable path to pursue. This will also permit differentiation across WTO members – e.g., by agreeing to *de minimis* provisions for specific sets of countries or facilitating the process of request and obtain waivers. The foregoing discussion of the changing incentives and incidence of subsidy-type policies in a GVC world suggest there is cause to revisit salience of “national treatment” and the WTO focus on “discrimination” as the key tests for adverse effects.

Making progress in updating the rules of the game for subsidies and associated sources of potential cross-border spillovers such as the behavior of SOEs requires deliberation that includes the major trading powers – those capable of generating negative externalities that are of systemic importance. Preparing the ground is a complex undertaking, as it requires recognition that subsidies may promote efficiency by helping to address market failures and overcome collective action problems – e.g., dealing with climate change. A law *and* economics approach is called for, akin to what has gradually emerged in the area of competition law (Hoekman and Nelson, 2020). Designing such an approach requires deliberation between – and support of – the various actors in- and outside

government that are involved in the design and implementation of subsidies and responsible for ensuring that markets are competitive.

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