Policy Commentary

The Trade Policy Collision of Our Times: China's Subsidies Encounter Abba Lerner and David Ricardo

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Abstract: This note takes a contrarian position on the significance of China's subsidies, which are generally viewed as intractable and damaging to the rules-based system. It considers the implications of Lerner Symmetry for the aggregate effect of China's subsidies and the implications of comparative advantage for the differential effects across industries, in a context where the effective differential tax burdens are unknown, as indeed is also the case with differential effects of tax and subsidy regimes (not to mention tariff regimes) in the rest of the world. It concludes that the net effect of China's subsidies is much less than commonly supposed and that differential effects that may be damaging can be handled, as they have been in the past, through tools available under the WTO Agreement.

Keywords: China, subsidies, Lerner symmetry, comparative advantage

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It is commonplace in trade policy circles to hear troubled – indeed almost anguished – complaints about China's subsidies. "What are we to do about those appalling subsidies?" one might hear a trade minister mutter, as she walks into Number 10, through security at the White House, or up the stairs at Centre Block. And the trade policy community helpfully does its best to explain to the lay public the problem and to offer up advice as to how these pernicious subsidies might best be addressed. These days, the usual policy commentary or Twitter thread ends with a somewhat discouraged concession of defeat – China is too large, too inward, its bureaucracy too insulated, etc. for anything to work. And then the usual nod to working with allies etc. to be … well, ineffectual and resigned. I think I have that about right.

There is, however, a better, more insightful and indeed more reassuring answer. It's hardly as stirring as the Marseillaise call to arms (Aux armes, citoyens!) to stand up to China, confront China, contain China (bit of a packaging problem there), or whatever. The answer rather is a bit bookish – actually, it's just theory.

But bear with me: what I propose to do is to walk through what happens when China's subsidies meet Lerner Symmetry and Comparative Advantage – the collision of our times, as it were. The maraschino cherry to this explosive cocktail of a narrative is the implications of the silence of the World Trade Organization (WTO) Agreement on fiscal matters (taxes), which are just negative subsidies.

To start, it is useful to focus on an apparent anomaly in the conventional narrative about those appalling subsidies in China, which unfairly advantage their domestic producers and exporters. Following accession to the World Trade Organization (WTO) in 2001, China's imports grew in tandem with its exports. That made China by far the fastest-growing market in the world – for its trading partners.

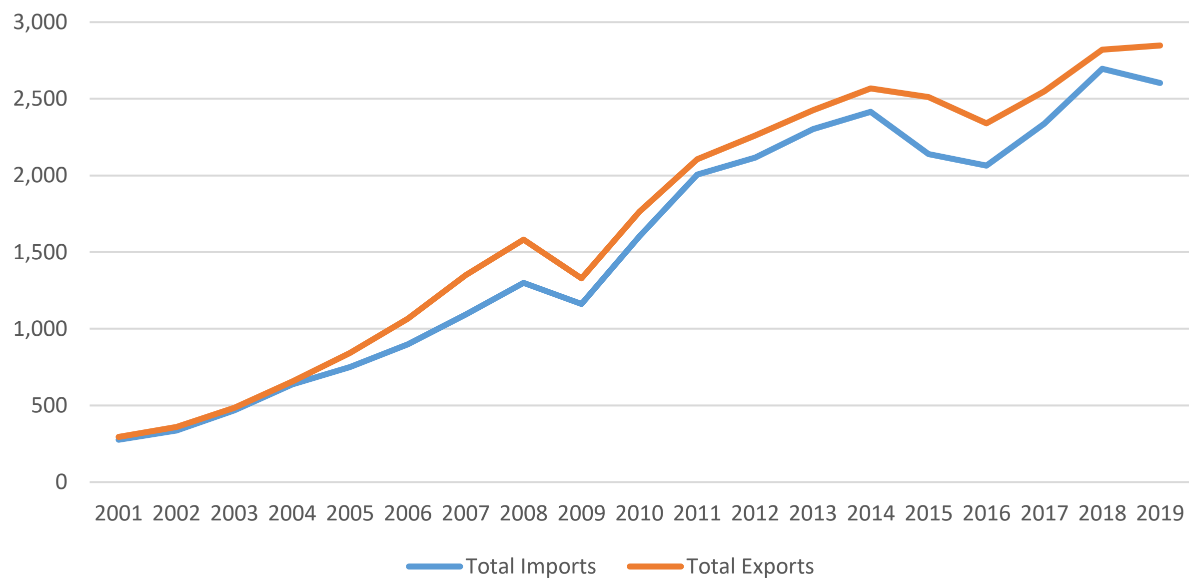
Table 1: China Imports and Exports of Goods, Services and Intellectual Property, 2001-19, USD billions

	2001	2019	Growth Multiple
Goods Imports	244	2,069	8.49
Goods Exports	266	2,499	9.39
Services Imports	31	501	16.16
Services Exports	27	283	10.33
IP Payments	1.94	34.37	17.74
IP Receipts	1.10	66.05	60.04
Total Imports	276	2,604	9.42
Total Exports	295	2,848	9.67

Source: Goods and services trade: International Trade Centre Trade Map; IP data: World Bank.

The figure below shows the time profile. The wedge between total imports and total trade, which opened up in 2005 was one of China's few macroeconomic management mistakes in the post-WTO era: China listened to the advice it was getting from the IMF (and actually from pretty much everyone else, the present author excepted – see Ciuriak, 2004) that it was on the verge of overheating and should take measures to slow its economy. The gap shrank during the Great Financial Crisis (GFC) when China sustained its growth while the world outside it shrank, but it opened up again in 2015-2016 when China again took macroeconomic measures to address domestic issues. Overall, China's imports grew more or less in tandem with its exports.

Figure 1: China Post-WTO Trade in Goods, Services and IP



How is this even possible, you might ask, when these trading partners' exporters are cut off at the knee by those aforementioned subsidies? To get at this question, we start with Lerner Symmetry. Originally articulated in an article in 1936, Abba Lerner explained that a tax on imports (a tariff, for example) is equivalent to a tax on exports (Lerner, 1936; see Costinot and Werning, 2017, for a modern restatement). A country that deploys tariffs to reduce imports and protect domestic producers is at the same time and with the same instrument putting up barriers to its exports and undermining its domestic producers (not necessarily, of course, the same ones who might be advantaged by tariff protection – but we'll get to that wrinkle below).

A subsidy is just a negative tax. A negative tax on exports (i.e., a subsidy for exports) is thus, by Lerner, equivalent to a negative tax on imports (in other words a subsidy for imports). Alors, voilà! The mystery explained. China's subsidies were working to subsidize other countries' exports to its own markets. In macroeconomic terms, at least, there was no harm and hence no foul.

As China's trade surged, its exports attracted countermeasures in the form of anti-dumping and countervailing duties. China was far and away the most-targeted economy in the post 2001 period. The result? After the first steep increase in trade as a share of China's GDP, the ratio trended down. By 2019, both exports and imports were lower as a share of GDP than they were in 2001.

So barriers to China's exports were ipso facto barriers to world exports to China – Lerner again.

Now let's take a somewhat more formal analytical look at this proposition. Several studies have examined the implications of a country's unilateral liberalization. Box 1 shows the results for Canada from Ciuriak et al. (2016); results for the United Kingdom are in Ciuriak et al. (2018).

Box 1: Canadian Unilateral Liberalization – Impacts on Imports and Exports by Partner

As the tables below show, a policy of dismantling a country's own trade barriers leads, in a general equilibrium setting, to a rise in exports commensurate with the rise in imports. Canada's total imports from the world rise by 3.94% or by CAD 36 billion or so at 2016 prices. But its exports – which are not liberalized at all – rise by 4.08% or about CAD 34 billion at 2016 prices.

Trade Impacts of Canada's Unilateral Liberalization: Canada's Imports by Region

	Accumulated change over baseline, CAD millions at 2016 prices			Accumulated % change over baseline, real terms		
	2018	2025	2035	2018	2025	2035
United States	2,249	2,789	3,224	0.51	0.59	0.64
Mexico	-82	51	116	-0.25	0.24	0.36
Other TPP	730	1,959	2,931	1.61	3.78	4.81
EU28	776	-628	-296	0.63	-0.55	-0.24
China	9,307	12,200	13,625	14.15	15.13	13.88
India	960	5,155	6,641	12.71	55.91	54.70
Korea	-54	24	50	-0.41	0.26	0.41
Taiwan	262	617	623	3.59	8.86	9.05
TFTA	341	1,805	2,877	4.27	18.75	21.05
Rest of World (residual)	-346	3,863	6,145	-0.38	4.01	5.34
World Total	**14,143**	**27,835**	**35,935**	**1.79**	**3.30**	**3.94**

Trade Impacts of Canada's Unilateral Liberalization: Canada's Exports by Region						
	Accumulated change over baseline, CAD millions at 2016 prices			Accumulated % change over baseline, real terms		
	2018	2025	2035	2018	2025	2035
United States	6,848	12,412	15,700	1.77	3.10	3.66
Mexico	262	569	833	2.37	4.43	5.26
Other TPP	612	2,049	2,790	1.81	5.21	6.13
EU28	1,577	3,472	4,502	1.77	3.66	4.30
China	626	1,625	2,714	1.55	3.01	3.54
India	80	260	413	1.21	3.10	3.49
Korea	236	1,065	1,693	1.77	6.13	7.58
Taiwan	65	149	195	1.81	3.79	4.45
TFTA	76	289	456	1.63	4.82	5.44
Rest of World (residual)	1,115	3,168	4,391	1.74	4.18	4.86
World Total	**11,498**	**25,057**	**33,688**	**1.73**	**3.45**	**4.08**

Box 2 shows the results for the UK by sector, comparing the gains from unilateral liberalization to the losses from a hard Brexit. While most sectors of the UK economy expand under unilateral liberalization, a number would likely shrink, with the largest negatives impacts on agricultural, which is the largest net beneficiary of protection. As an unrelated aside, for the most part, unilateral liberalization tends to compound the impact on sectors that lose under Brexit – although, as the original text of this article underscores: "This read-out from the CGE results concerning the relative strength of the impact of unilateral vs. Brexit must be taken with caution in sectors that feature deep value-chain integration, where the effects of Brexit are likely understated." True words indeed!

Box 2: UK Unilateral Liberalization – Impacts on UK Industrial Output by Sector

As shown in the tables below, differential degrees of protection (in this case, net tariff protection) varies across industries. Thus, for the UK, unilaterally removing its import protections does lead to a rise in total exports of some UKP 30.9 billion alongside total imports of UKP 37.1 billion (Ciuriak et al., 2018), but the net impact across sectors varies considerably.

Major Gaining Sectors under Unilateral Liberalization

	Brexit	Unilateral	Net
Non-Ferrous Metals	-1.9	**8.2**	6.3
Transport Equipment	-0.2	**5.6**	5.4
Ferrous Metals	-4.0	**4.9**	1.0
Automotive	-8.7	**3.6**	-5.1
Machinery & Equipment	-0.3	**2.4**	2.1
Metal Products	-1.2	**2.1**	0.9
Mineral Products	-1.5	**2.0**	0.6
Electronic equipment	-1.5	**2.0**	0.5

Source: simulations by the study team.

Major Declining Sectors under Unilateral Liberalization			
	Brexit	Unilateral	Net
Pork & Poultry	10.1	**-51.5**	-41.4
Beef	-5.1	**-22.1**	-27.2
Other Farming	-1.6	**-10.5**	-12.1
Dairy	9.2	**-8.8**	0.4
Cereal grains	-1.0	**-5.1**	-6.2
Textiles, Apparel & Leather	-6.4	**-3.3**	-9.8
Fruit & Vegetables	5.5	**-2.1**	3.4
Sugar	-4.8	**-1.3**	-6.1
Food Products	-2.2	**-1.1**	-3.3
Communication services	-1.1	**-1.0**	-2.0

Source: simulations by the study team.

Against this background, let's now review the narrative formation around the evolution of China's trade over the last two decades. When China joined the WTO in 2001, most of the liberalization was undertaken by China, not by its trading partners.[1] The general concern at the time was not whether the world could handle the flood of Chinese exports, because that is not what was expected.[2] The question was whether China could handle the flood of western imports! But as Lerner Symmetry underscores, China's liberalization of its imports was equivalent to a reduction of the barriers abroad to its exports. And so, even as China's imports exploded, making it the fastest growing destination for world exports, so did its exports.

China's trading partners were astonished and started to debate whether China should have been allowed into the WTO because of all those exports, which they hadn't seen coming. They also started to look for explanations as to how China had engineered those exports – subsidies, industrial policy, Xi Jinping thought, stolen trade secrets, etc.

But did anyone think about trade theory? Now, it is important to emphasize that we are not discussing some obscure 1936 article that no-one reads or remembers anymore (although to be honest, it doesn't seem that many out there have ever heard of it, let alone have forgotten or still remember it) – this theorem is as fundamental to trade policy as Ricardo's Comparative Advantage (capitalized here out of respect) is to trade theory.

Turning to comparative advantage, let's consider what this principle has to say on this issue. Comparative advantage has been assessed by Paul Samuelson as the only economic theory that is at once universally true and non-obvious (Samuelson, 1972). The "non-obvious" bit is a warning that not everyone who uses the term actually understands it. They might, for example, think it is the same as "competitive advantage". It's not. We'll get to this – but for now, the key lesson from

[1] Some WTO Members had to bring trade remedy measures they had imposed on China into conformance with WTO rules (e.g., Mexico) and there was an important contribution from the reduction of uncertainty about future market access; see e.g., Crowley and Ciuriak (2018) on the powerful role of uncertainty in inhibiting trade.

[2] See Ciuriak (2002), "The WTO After China", a comment on China's accession commitments, which faithfully reflects the conventional view of the implications of China's WTO accession.

the principle of comparative advantage is that, if a country subsidizes every industry equally, it subsidizes none.

Comparative advantage compares costs not between countries (as those who think in competitive advantage terms are wont to do) but between industries in the same country. Countries impose differential burdens of taxes on their various industries and firms and in return provide them differential levels of support through either public goods or industrial subsidies. It's the difference between tax and subsidization by industry that determines which industries a country's policies boost in net terms and which they suppress in net terms.

To put this in numbers, if China taxes, say, only 20% of GDP and subsidizes to the tune of 10% of GDP, one might think that its firms would be much more competitive than those in a country that taxes, say, 45% of GDP and subsidizes only 3%, right? But no. If China's subsidies and taxes across industries are the same, and the same is true in this comparator country following the OECD Silverlinings Playbook on how to run a modern economy, Ricardo's time-honored comparative advantage theorem tells us that these tax and subsidy policies wash out and each economy's trade pattern remains determined by other factors that establish comparative advantage – things like labour and capital endowments, resource endowments, and so forth – subsidies and taxes can be ignored.

These considerations bring us to a third issue: we can't make economic sense of subsidies without also looking at taxes. It is, after all, the net that matters for trade. Looking at subsidies alone is the sound of one hand clapping.

The WTO Agreement goes to some length in imposing disciplines on negative taxes (subsidies) in the Agreement on Subsidies and Countervailing Measures, but has little to say about positive taxes, except that a country's tax policy cannot unfairly tax an imported product compared to the competing domestic product. Domestic fiscal policy is otherwise off the table at the WTO.

This gives rise to what we might call the "original sin" of the whole "level playing field" discussion which focuses on subsidies while ignoring positive taxes. As a result, this discussion starts off inherently flawed. An alternative metaphor that is perhaps helpful in showing where this leads is to think of the debate as being held on a slippery slope – which inevitably results in its sliding into confusion. For a fuller discussion of level playing fields, see Ciuriak (2021).

What matters for the structure of trade – which country gets to export which product – depends on the net of support less tax burden by product and that is effectively impossible to calculate. See Sykes (2003) for a devastating exposition of this point.

So what to make of China's appalling subsidies? When China's subsidies collide with Lerner Symmetry and Comparative Advantage, it's a bit like matter and anti-matter colliding: they for the most part annihilate each other (well, Lerner Symmetry and Comparative Advantage live on in figurative space, of course).

Lerner Symmetry tells us that the bulk of China's pervasive subsidies, grey policies, etc. work as much to the advantage of third country exporters to China as they help China's own exporters. This explains why business worldwide is not only keen to play in the China market but actually is able to, and to make money – oodles of it. (Fans of “competitive advantage”: do you see your problem? Resign now!).

Comparative advantage tells us that it is the next-to-impossible-to-calculate nets that tweak trade patterns. Most of the problem, in other words, vaporizes, while marginal bits of net subsidy are left floating around that can cause trouble but that can also be addressed on a case-by-case basis, using tools that the WTO already makes available (the ever malleable anti-dumping and countervailing duties).

So do we need to form an international coalition to take on China (as the G7 darkly discussed on 19 February 2021, with the return of the United States to the international club scene; Fox News, 2021)? My answer is no. Taking China to the proverbial woodshed and thrashing it for subsidizing its exports amounts to thrashing it for subsidizing our exports to China! Self-flagellation works just as well and can be done in the privacy of one’s own country.

And my message to our trade ministers? Diversify the message to China. You might say, for example, “China: stop those appalling subsidies of our exports into your market!” This is after all mathematically equivalent to what trade ministers are saying when microphones are thrust in front of them today – but much more fun and erudite. The trade policy sword cuts two ways; this message needs to get out.

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