

Encouraging Developing Country Involvement in a Post-2012

Climate Change Regime: Carrots, Sticks or Both?

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My engagements on climate issues and the climate-trade nexus: Look back

- Zhang, Z.X. (1990), *Evolution of Future Energy Demands and CO2 Emissions up to the Year 2030 in China*, ECN-I--90-038, Energy research Centre of the Netherlands (ECN).
- Zhang, Z.X. (1998), Greenhouse Gas Emissions Trading and the World Trading System, *Journal of World Trade*, Vol. 32, No. 5, pp. 219-239.
 - This is the first article in a law and economics journal to analyze potential conflicts.



International Rules for Greenhouse Gas Emissions Trading

*Defining the principles,
modalities, rules and
guidelines for verification,
reporting and accountability*

Tom Tietenberg, Michael Grubb,
Axel Michaelowa, Byron Swift and
ZhongXiang Zhang

Outlines

- The climate-trade nexus
- Developing country commitments in an immediate post-2012 climate regime
- Proposed border adjustment measures in the U.S. legislations
- WTO scrutiny of U.S. congressional climate bills
- Effectiveness of EAR in leveraging China to change behaviors?
- Methodological challenges in implementing EAR
- How should China respond to the U.S. proposed carbon tariffs?
- Concluding remarks

The climate-trade nexus [1]

- With greenhouse gas emissions embodied in virtually all products produced and traded in every conceivable economic sector, effectively addressing climate change will require a fundamental transformation of our economy and the ways energy is produced and used. This will certainly have a bearing on world trade because it will affect the costs of production of traded products and therefore their competitive positions in the world market.
- This climate-trade nexus has become the focus of an academic debate (e.g., Zhang, 1998 and 2004; Zhang and Assunção, 2001 and 2004; Charnovitz, 2003; Bhagwati and Mavroidis, 2007; Ismer and Neuhoff, 2007; The World Bank, 2007; Hufbauer, Charnovitz and Kim, 2009).

The climate-trade nexus [2]

- Gains increasing attention as governments are taking great efforts to forge a post-2012 climate change regime to succeed the Kyoto Protocol and aim for green growth.
 - Informal Trade Ministers' Dialogue on Climate Change, December 8-9, 2007, Bali, where 32 trade ministers emphasized the need for increased high-level engagement for improving the mutual supportiveness of climate and trade regimes.
 - The Lieberman-Warner Climate Security Act of 2008 (U.S. Senate, June 2008)
 - Potential carbon tariffs on imported goods: “If China refused, the U.S. would have to use tariffs and duties on imported Chinese goods” (U.S. Energy Secretary Steven Chu before U.S. House of Representatives Science and Technology Committee, March 17, 2009.
 - The American Clean Energy and Security Act of 2009 (H.R. 2998, Waxman-Markey bill)
 - The Clean Energy Jobs and American Power Act (S. 1733, Kerry-Boxer bill)

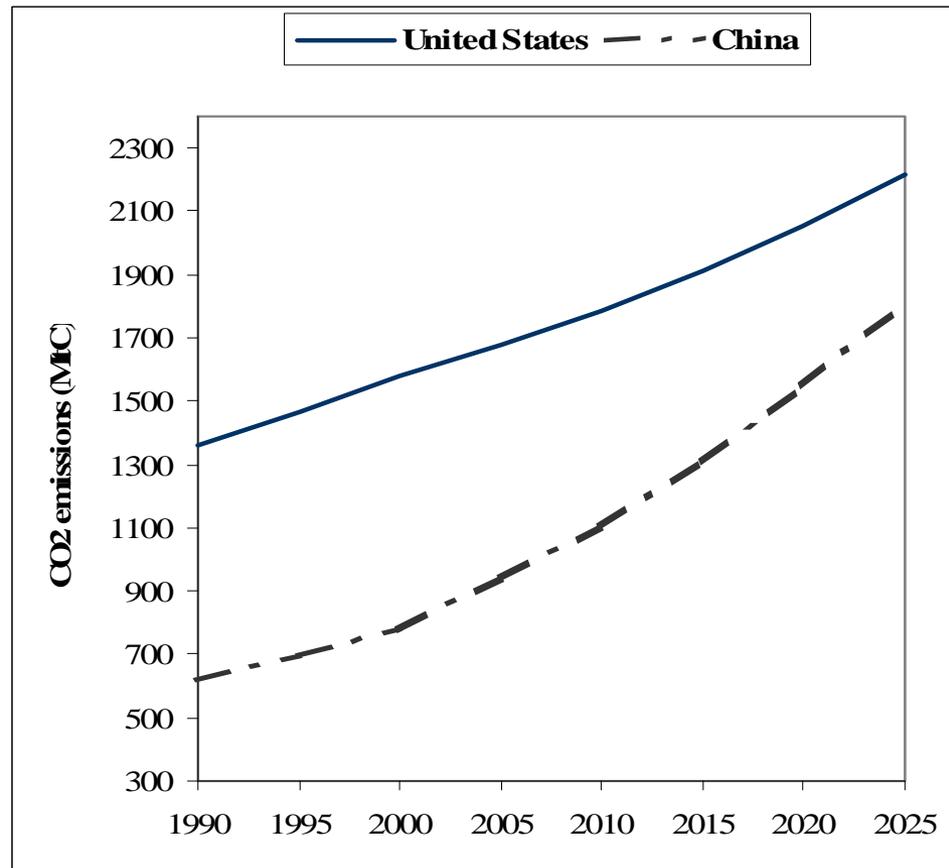
The climate-trade nexus [3]

- The IPCC calls for developed countries to cut their greenhouse gas emissions by 25-40% by 2020 and by 80% by 2050 relative to their 1990 levels. Meanwhile, under the UNFCCC principle of “common but differentiated responsibilities”, developing countries are allowed to move different speeds as do their developed counterparts. This principle is clearly reflected in the Bali roadmap, which requires developing countries to take “nationally appropriate mitigation actions ... in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner”.
- Understandably, the U.S. and other industrialized countries like to see developing countries, in particular large developing economies, go beyond that because of
 - Economic concerns about own competitiveness
 - Environmental concerns about carbon leakage - growing greenhouse gas emissions in developing countries

Energy conservation in China: how important?

- China achieved a quadrupling of its GDP with only a doubling of energy consumption between 1980 and 2000.
- On the trends in the 1980s and 1990s, U.S. EIA (2004) estimated that China's CO₂ emissions are not expected to catch up with the world's largest carbon emitter by 2030. However, China's energy use had surged since the turn of this century, almost doubling between 2000 and 2007. Despite similar rates of economic growth, the rate of growth in China's energy use during this period (9.74% per year) has been more than twice that of the last two decades in the past century (4.25% per year).
- As a result, China was the world's no.1 carbon emitter in 2007, instead of **until 2030** as estimated few years ago.
- If China's energy use and the resulting carbon emissions had followed their trends between 1980 and 2000, rather than surged since 2001, then international climate debate on China would now be much different.

CO₂ emissions in China and the United States, 1990-2025 (IEO 2004)



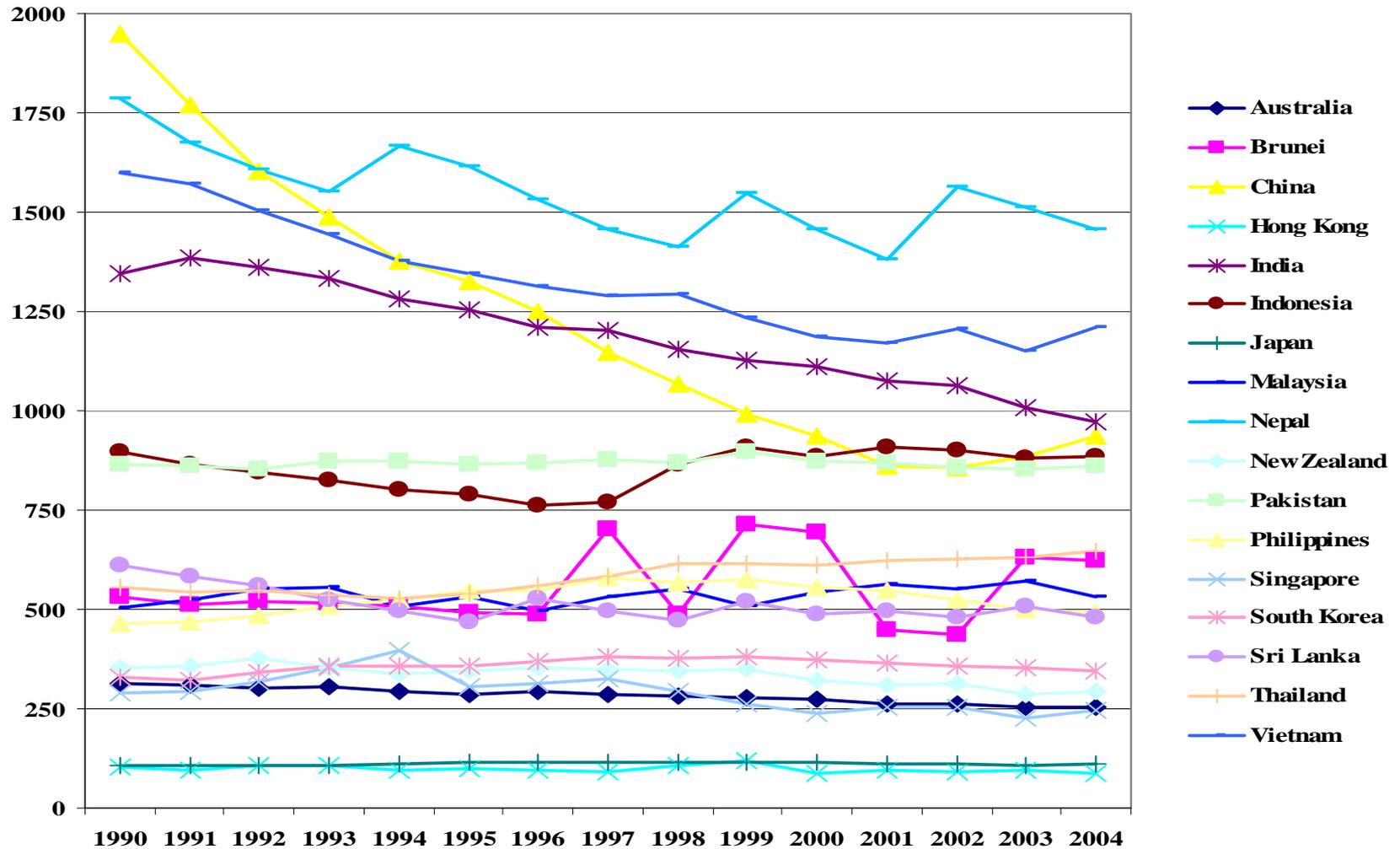
The first roadmap for China: Six plausible options in ascending order of stringency (Zhang for UNDP, 1998; Zhang, *Energy Economics*, 2000)

- Active participation in CDM as meaningful participation
- (Undefined) Demonstrable progress between the first commitment period and 2020
- Specific policies and measures (explicitly demonstrate adequate efforts) between the first commitment period and 2020
- Energy intensity or carbon intensity around or beyond 2020
- Sectoral emissions cap around or beyond 2020
- Bottom line: A combination of a targeted carbon intensity level with an emissions cap on a particular sector around or beyond 2020

How far can DC commitments go in an immediate post-2012 climate regime? [1]

- Given the very short timeframe to conclude the negotiations, it would in all likelihood not be possible to reach the necessary agreement on the rules, countries and sectors covered and the levels of ambitions for developing countries, especially due to the amount of the data that would be required.
- The Sydney APEC Leaders' Declaration on Climate Change Energy Security and Clean Development, September 8, 2007
 - Australia proposed that **all 21 APEC economies**, regardless of whether they are developed and developing economies, agree to reduce energy intensity by at least 25% by 2030.
 - But the leaders only agreed to work towards achieving an **APEC-wide** aspirational goal in energy intensity by at least 25% by 2030, relative to 2005 levels.
 - Since 1990, the rate of energy efficiency improvement in IEA countries has been **less than 1% per year** (IEA, 2007); many Asian countries consumed more energy per unit of GDP in 2004 than they did in 1990 (Zhang, 2008).

Energy Use/GDP in the Selected Asian Countries, 1990-2004 (TOE/million 2000 US\$) (Zhang, 2008)



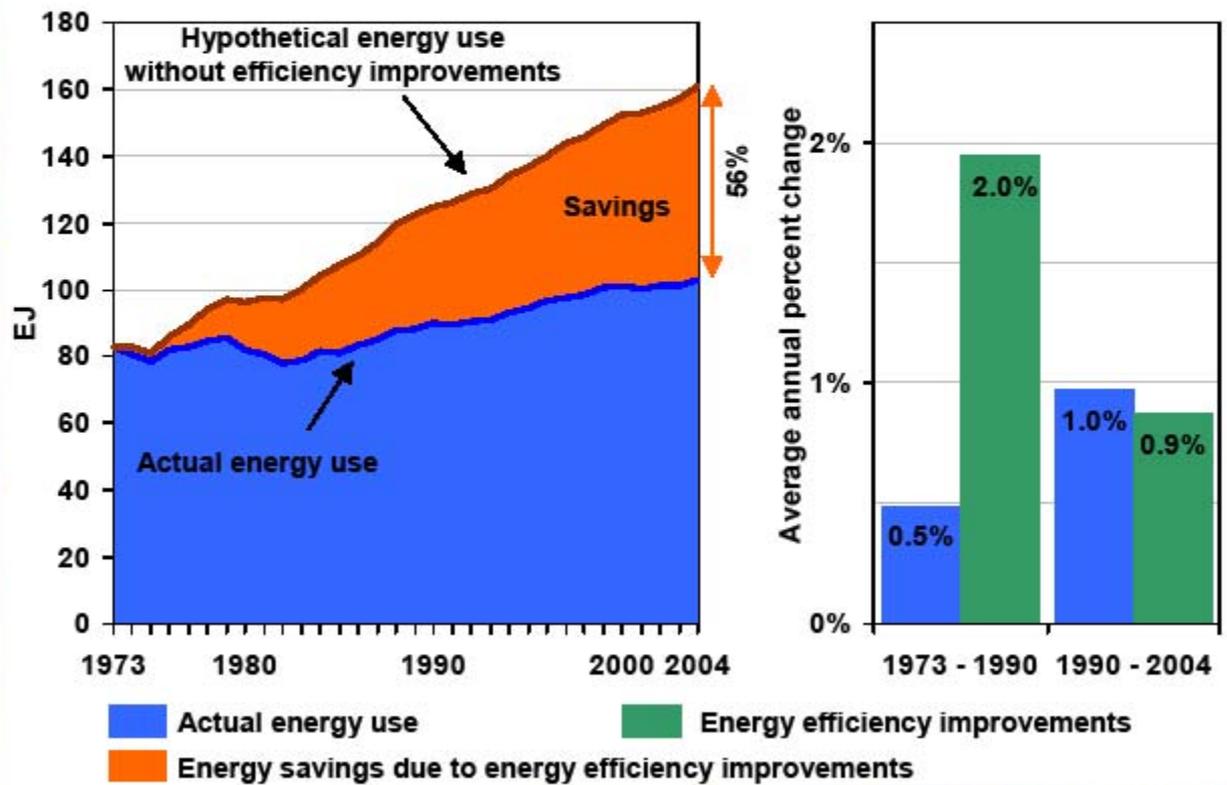
Energy Use in the New Millennium

Trends in IEA Countries

ENERGY INDICATORS

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Overall Trends in Energy Efficiency



How far can DC commitments go in an immediate post-2012 climate regime? [2]

- It is inconceivable that developing countries would ever go beyond the aforementioned third option between 2013 and 2020 without an effective financial mechanism.
- The U.S. factor will continue to play a role in affecting developing country's willingness to take on commitments and the ambition of that commitments.
 - The Kerry-Boxer bill sets U.S. GHG emissions 20% below their 2005 levels by 2020. Even if the bill become law, the U.S. GHG emissions in 2020 would at best be about 7% below their 1990 level.
 - In anticipation that the U.S. would take on the more stringent commitments subsequent to the first compliance period (namely, far below its 1990 level), I envisioned a decade ago that developing countries may go beyond the aforementioned third option. However, the U.S. emissions in 2020 would at best be kept at its Kyoto commitment. This is far from the point where it is likely that developing country would do that.

Encouraging developing countries to do more: carrots, sticks, or both?

- Understandably, U.S. and other industrialized countries like to see developing countries, in particular large developing economies, to go beyond that. They are considering unilateral trade measures to “induce” developing countries to do so.
- A variety of measures have been put forward for the U.S. legislators to consider, falling into the three broad categories (Subcommittee on Energy and Air Quality of the U.S. House of Representatives, 2008):
 - border adjustment measures
 - performance standards
 - carbon market design
- WTO members are free to unilaterally decide what measures to take and under what conditions. But once they have made such a choice, then and only then the WTO rules apply.
- To date, there is a considerable disagreement as to what measures would be most likely to pass muster under the WTO. For a number of reasons, including WTO consistency, but also political reality and effectiveness in terms of actual emissions reductions, industrialized countries need to focus on carrots, assisted with sticks, as a means of encouraging developing countries to do more domestically than what are internationally agreed on.

Proposed border adjustment measures in the U.S. legislations [1]

- The notion of border carbon adjustments (BCA) is not an American invention. The idea of using BCA to address the competitiveness concerns as a result of differing climate policy was first floated in the EU, in response to the U.S. withdrawal from the Kyoto Protocol (KP).
- On a balance, the European Commission has suggested that it could implement a “carbon equalization system ... with a view to putting EU and non-EU producers on a comparable footing”. “Such a system could apply to importers of goods requirements similar to those applicable to installations within the European Union, by requiring the surrender of allowances.” (European Commission, 2008).
- While the EU has considered the possibility of imposing a border allowance adjustment should serious leakage issues arise in the future, it has put this option on hold at least until 2012. The European Commission has proposed using temporary free allocations to address competitiveness concerns in the interim. Its aim is to facilitate a post-2012 climate negotiation while keeping that option in the background as a last resort.

Proposed border adjustment measures in the U.S. legislations [2]

- Interestingly, the U.S. legislators not only have embraced such BCA measures that it used to oppose, but also have focused on their design issues in more details.
- In the U.S. Senate, the Boxer Substitute of the Lieberman-Warner Climate Security Act (S. 3036) mandates that starting from 2014 importers of products covered by the cap-and-trade scheme would have to purchase emissions allowances from an International Reserve Allowance Programme if no comparable climate action were taken in the exporting country.
- In the U.S. House of Representatives, the American Clean Energy and Security Act of 2009 (H.R. 2998), sponsored by Reps. Henry Waxman and Edward Markey, was narrowly passed in June 26, 2009. The so-called Waxman-Markey bill sets up an “International Reserve Allowance Program” whereby U.S. importers of primary emission-intensive products from countries having not taken “greenhouse gas compliance obligations commensurate with those that would apply in the United States” would be required to acquire and surrender carbon emissions allowances.

Proposed border adjustment measures in the U.S. legislations [3]

- **The comparability test** to determine whether a country will be exempted from EAR under U.S. cap-and-trade regime
 - The EU by any definition would pass this test, because it has taken under the KP and is going to take in its follow-up regime much more ambitious climate targets than U.S..
 - All other remaining Annex 1 countries but the U.S. have accepted mandatory emissions targets under the KP. Thus, they would likely pass the comparability test as well.
- While France targeted the American goods, **the U.S. EAR clearly targets major emerging economies**, such as China and India.

Lieberman-Warner Climate Security Act of 2008 [1]

- Start with the Lieberman-Warner bill
 - The import emissions allowance requirement was a key part of the Lieberman-Warner bill, and will re-appear again as the U.S. Senate starts writing, debates and votes its own version of a climate change bill later this year after the U.S. House of Representatives narrowly passed the Waxman-Markey bill.
 - Concerns raised in the Lieberman-Warner bill seem to have provided references to writing relevant provisions in the Waxman-Markey bill to deal with the competitiveness concerns.

Lieberman-Warner Climate Security Act of 2008 [2]

- A proposal first introduced by the International Brotherhood of Electrical Workers (IBEW) and American Electric Power (AEP) in early 2007 would require importers to acquire emission allowances to cover the carbon content of certain products from countries that do not take climate actions comparable to that of the U.S. (Morris and Hill, 2007).
- The original version of the Lieberman-Warner bill incorporated this mechanism, threatening to punish energy-intensive imports from developing countries by requiring importers to obtain emission allowance, but only if they had not taken comparable actions by 2020, eight years after the effective start date of a U.S. cap-and-trade regime begins.
- The latest version of the Lieberman-Warner bill has brought the deadline forward to 2014 to gain business and union backing.
- Developing countries will have to take climate actions comparable to that of the U.S. in order to avoid this punishment. If strictly implemented, this will pose an impossibly high hurdle for developing countries.

WTO scrutiny of the Lieberman-Warner bill [1]

- The aim of including trade provisions is to facilitate negotiations while keeping open the possibility of invoking trade measures as a last resort.
- The inclusion of trade provisions might be considered the ‘price’ of passage for any U.S. legislation capping its greenhouse gas emissions.
- An important issue on the table is the length of the grace period to be granted to developing countries. While many factors need to be taken into consideration here (Haverkamp, 2008), significantly bringing forward the imposition of EAR to U.S. imports is rather unrealistic, given the already very short grace period ending 2019 in its original version.
 - The Montreal Protocol grants developing countries a grace period of 10 years (Zhang, 2000).
 - Given that the scope of economic activities affected by a climate regime is several orders of magnitude larger than those covered by the Montreal Protocol, if legislation incorporates border adjustment measures (put the issue of their WTO consistency aside), in my view, they should not be invoked at least 10 years after mandatory U.S. emission targets take effect.

WTO scrutiny of the Lieberman-Warner bill [2]

- Unrealistically shortening the grace period granted of two years before resorting to the trade provisions would increase uncertainty to withstand a challenge before the WTO.
- The ruling in the Shrimp-Turtle dispute: For a trade measure to be considered WTO consistent, a period of good faith efforts to reach agreements among the countries concerned is needed before imposing the measure. Put another way, trade provisions should be preceded by major efforts to negotiate with partners within a reasonable timeframe.
- Developing countries need reasonable time to develop and operate national climate policies and measures. Take the establishment of an emissions trading scheme as a case in point (Zhang, 2007).
 - Even for the U.S. SO₂ Allowance Trading Program, the entire process from the U.S. EPA beginning to compile the data for its allocation database in 1989 to publishing its final allowance allocations in March 2003 took almost four years.
 - For the first phase of the EU Emissions Trading Scheme, the entire process took almost two years from the EU publishing the Directive establishing a scheme for greenhouse gas emission allowance trading on 23 July 2003 to it approving the last national allocation plan for Greece on 20 June 2005.
 - For developing countries with very weak environmental institutions and that do not have dependable data on emissions, fuel uses and outputs for installations, this allocation process is expected to take much longer than what experienced in the U.S. and the EU.

WTO scrutiny of the Lieberman-Warner bill [3]

- In the case of a WTO dispute, the question will arise whether there were any alternatives to trade provisions that could fulfil the same function.
 - In the GATT Thai cigarette dispute, the Dispute Settlement Panel concluded that Thailand had legitimate concerns with health, but it had measures available to it other than a trade ban that would be consistent with the GATT (e.g. bans on advertising) (GATT, 1990).
 - Indeed, there are alternatives to resorting to trade provisions to protect the U.S. trade-sensitive, energy-intensive industries during a period of good faith efforts to negotiate with trading partners on comparable actions. One way to address competitiveness concerns is to initially allocate free emission allowances to those sectors vulnerable to global competition, either totally or partially-- Initially giving out about 13% of the allowances to fossil fuel suppliers freely instead of auctioning in an emissions trading scheme in the U.S. would be sufficient to prevent their profits with the emissions constraints from falling in comparison with those without the emissions constraints (Bovenberg and Goulder, 2002).

WTO scrutiny of the Lieberman-Warner bill [4]

- The import emission allowance requirement approach would distinguish between two otherwise physically identical products on the basis of climate actions in place in the country of origin. This discrimination of like products among trading nations would constitute a *prima facie* violation of WTO rules.

WTO scrutiny of the Lieberman-Warner bill [5]

- To pass WTO scrutiny of trade provisions, the U.S. is likely to make reference to the health and environmental exceptions provided under GATT Article XX. This Article authorizes governments to employ otherwise GATT-illegal measures when such measures are necessary to deal with certain public policy problems.
 - The GATT panel in Tuna/Dolphin II concluded that Article XX does not preclude governments from pursuing environmental concerns outside their national territory, but such extra-jurisdictional application of domestic laws would be permitted only if aimed *primarily* at having a conservation or protection effect (GATT, 1994; Zhang, 1998).
 - The capacity of the planet's atmosphere to absorb greenhouse gas emissions without adverse impacts is an 'exhaustible natural resource'. Thus, if countries take measures on their own and have extra-jurisdictional application *primarily* to prevent the depletion of this 'exhaustible natural resource', such measures will have a good justification under GATT Article XX.
 - Along this reasoning, if the main objective of trade provisions in the Climate Security Act is to protect the environment by requiring other countries to take action comparable to that of the U.S., then mandating importers to purchase allowances from the designated special international reserve allowance pool is debatable under GATT Article XX. To increase the prospects for a successful WTO defence, trade provisions can refer to the designated special international reserve allowance pool, but may not do without adding "or equivalent". This will allow importers to submit equivalent emission reduction units that are not necessarily allowances but are recognized by international treaties to cover the carbon contents of imported products.

The Lieberman-Warner bill vs the Waxman-Markey bill [1]

- The concerns raised in the Lieberman-Warner bill have shaped relevant provisions in the Waxman-Markey bill to deal with the competitiveness and leakage concerns. Accordingly, the Waxman-Markey bill has avoided all the aforementioned controversies raised in the Lieberman-Warner bill.
- Unlike the EAR in the Lieberman-Warner bill which focuses exclusively on imports into the U.S., but does nothing to address the competitiveness of U.S. exports in foreign markets, the Waxman-Markey bill included both rebates for few energy-intensive, trade-sensitive sectors and free emission allowances to help not to put U.S. manufacturers at a disadvantage relative to overseas competitors.

The Lieberman-Warner bill vs the Waxman-Markey bill [2]

- Unlike the Lieberman-Warner bill, the Waxman-Markey bill also gives major developing nations time to enact their climate-friendly measures. Under this House bill, the International Reserve Allowance Program may not begin before January 1, 2025. The U.S. President may only implement an International Reserve Allowance Program for sectors producing primary products.
- While the bill called for a “carbon tariff” on imports, it **very much framed that measures as a last resort** that a U.S. president could impose at his or her discretion regarding border adjustments.

The Lieberman-Warner bill vs the Waxman-Markey bill [3]

- However, **the last-minute changes in the bill changed a Presidential long-term back-up option to a requirement** that the President put such tariffs in place under the specified conditions. Such changes significantly changed the spirit of the bill, moving it considerably closer to risky protectionism.
 - In the middle of the night before the vote on June 26, 2009, a provision was inserted in this House bill that requires the President, starting in 2020, to impose a border adjustment on certain goods from countries that do not act to limit their carbon emissions. The President can waive the tariffs only if he receives explicit permission from U.S. Congress.
- President Obama opposed to a trade provision in that bill. The carbon tariff proposals have also drawn fierce criticism from China and India.
 - Without specific reference to the U.S. or the Waxman-Markey bill, China's Ministry of Commerce said that proposals to impose "carbon tariffs" on imported products will violate the WTO rules. That would enable developed countries to "resort to trade in the name of protecting the environment".

Ineffectiveness of EAR in leveraging China to change behaviors [1]

- It is questionable that an EAR threat would be effective as an inducement for major emerging economies like China to take on such level of climate actions that U.S. legislations aim.
 - The EAR under the proposed U.S. cap-and-trade regime would not apply to all imports. Rather, it would specifically target those primary emission-intensive products, such as steel, aluminium, and cement.
 - The logic for the threat of EAR lies that such threat of losing market access for these products would be enough to jawbone China to take climate actions that it would otherwise not. However, the problem with this logic is that China's burgeoning supply of these carbon-intensive products is not mainly destined for export. Rather, they are *made in China for China*, going primarily to meet Chinese own demand.

Ineffectiveness of EAR in leveraging China to change behaviors [2]

- As the world's largest steel export, China only exported 2% of its steel production to the EU and less than 1% to the U.S. in 2007. As the world's largest cement producer and exporter, China consumed 97% of its cement domestically, and exported less than 1% of its production to the U.S. in 2007 (Houser, 2008; Houser et al., 2008). Even if EAR is implemented jointly with the EU, it has **little leverage effect on China because China is unlikely to raise the cost of producing 97% of its output for domestic market in order to protect a market of less than 3% of its production abroad.**
- This effect on the targeted country will be further alleviated by re-routing trade flows to deliver the covered products from countries that are not subject to the EAR scheme. In the end, **this neither affects on China nor protects U.S. steel producers.**
 - With Japan passing the comparability test and thus being exempted from an EAR under the proposed U.S. cap-and-trade regime, imposing an EAR on Chinese steel, but not on Japanese steel, could make Japanese steel more competitive in the U.S. market than Chinese steel. That could lead Japanese steel makers to sell more steel to the U.S. and Japanese steel consumers to import more from China (Houser et al., 2008).

Methodological challenge in implementing BCA

- Identifying the appropriate carbon contents embodied in traded products will present formidable technical difficulties, given the wide range of technologies in use around the world and very different energy resource endowments and consumption patterns among countries.
- In the absence of any information regarding the carbon content of the products from exporting countries, importing countries, the U.S. in this case, could adopt either of the two approaches to overcome information challenge in practical implementation.
- One is to prescribe the tax rates for the imported products based on U.S. domestically predominant method of production for a like product, which sets the average embedded carbon content of a particular product (Zhang, 1998; Zhang and Assunção, 2004).
 - The U.S. Secretary of the Treasury has adopted this approach in the tax on imported toxic chemicals under the Superfund Tax (GATT 1987; Zhang, 1998).
- Alternative is to set the best available technology (BAT) as the reference technology level and then use the average embedded carbon content of a particular product produced with the BAT in applying BCA (Ismer and Neuhoff, 2007).
- To be more defensible, it should allow foreign producers to challenge the carbon contents applied to their products to ensure that they will not pay for more than they have actually emitted.

“As long as China does not signal well ahead when to take on the emissions caps, it will always be confronted with the threats of trade measures.”

ZhongXiang Zhang

Interview with *European Energy Review*

Climate commitments for China: A roadmap to 2050 (Zhang, 2009) [1]

- I propose that China take as its negotiation position for Copenhagen requiring
 - greenhouse gas emissions in industrialized countries to be cut by 80% by 2050 relative to their 1990 levels and
 - per capita emissions for all countries by 2050 no more than the world's average at that time.
- At a right time (e.g., at a time when the U.S. Senate is going to debate and ratify any global deal that would emerge from Copenhagen and beyond), China signals well ahead that it will take on binding absolute emission caps around 2030.

Why around 2030 should China take on absolute emissions caps? [1]

- The earlier China would take on emissions caps, the more likely the IPCC goal of emissions peaking by 2020 as the latest would be achieved. However, given that China is a country at low development stage and has coal-fueled, rapidly growing economy, its carbon emissions are still on the climbing trajectories well beyond 2030, even if some energy saving policies and measures have been factored.
- Before legally binding commitments become applicable to Annex I (industrialized) countries, they have a grace period of 16 years starting from the Earth Summit in June 1992 when Annex I countries promised to individually or jointly stabilize emissions of CO₂ and other greenhouse gases at their 1990 levels by the end of the past century to the beginning of the first commitment period in 2008. This would point to the first binding commitment period starting around 2026 for China.
- Until CCS projects are built to the extent to achieve economies of scale enough to bring down the cost, China does not feel confident on committing to absolute emissions caps. On the current trends, it is unlikely that CCS will find large-scale application both in China and elsewhere before 2030.

Why around 2030 should China take on absolute emissions caps? [2]

- The knowledgeable U.S. politicians, e.g., Reps. Henry Waxman and Edward Markey the sponsors of the American Clean Energy and Security Act of 2009, understand that developing countries need reasonable time to develop and operate national climate policies and measures. Indeed, the Waxman-Markey bill gives China, India and other major DCs time to enact their climate-friendly measures.
- Another timing indicator is a lag between treaty signing and budget period. With the Kyoto Protocol signing in December 1997 and the first budget period starting 2008, the earliest date to expect China to introduce binding commitments is 2020. The Montreal Protocol grants developing countries a grace period of 10 years. Given that the scope of economic activities affected by a climate regime is several orders of magnitude larger than those covered by the Montreal Protocol, there should be a grace period of much longer than 10 years for developing countries after mandatory emission targets for Annex I countries take effect.
- While it is not unreasonable to grant China a grace period, delaying the timing of China taking on emissions caps beyond 2030 is not acceptable.
 - China's baseline carbon emissions in 2030 are projected to reach 11.73 billion tCO₂, relative to 6.4 billion tCO₂ for the U.S. This gap could become even bigger, provided that the U.S. would cut its emissions to the levels proposed by the Obama administration and under the American Clean Energy and Security Act of 2009.

Climate commitments for China:

A roadmap to 2050 (Zhang, 2009) [2]

- It is hard to imagine that China would apply the brakes so sharply as to switch from rapid emissions growth to immediate emissions cuts without passing through several intermediate phases.
 - After all, China is a developing country right now, no matter how rapidly the Chinese economy is expected to grow in the future.
- Assuming the commitment period of five years as the Kyoto Protocol has adopted, I envision that China would need the following three transitional periods of increasing climate obligations before taking on absolute emissions caps.
- Further credible energy-conservation commitments starting 2013
 - China has already committed itself to quantified targets on energy conservation and the use of clean energy. It needs to extend its level of ambition, further making credible quantified domestic commitments in these areas for the second commitment period.
- Voluntary “no lose” emission targets starting 2018
- Binding carbon intensity targets as its international commitment starting 2023
- Emissions capped starting 2028, leading to the global convergence of per capita emissions by 2050

Concluding remarks [1]

- WTO rules need to be carefully scrutinised, and efforts need to be made early on to ensure that the proposed climate policies comply with them. After all, a conflict between the trade and climate regimes, if it breaks out, helps neither trade nor the global climate.
- To increase the prospects for a successful WTO defence of the Lieberman-Warner type of border adjustment provision,
 - there should be a period of good faith efforts to reach agreements among the countries concerned before imposing such trade measures.
 - WTO consistency also requires considering alternatives to trade provisions for the same function.
 - trade provisions can refer to the designated special international reserve allowance pool, but should allow importers to submit equivalent emission reduction units that are recognized by international treaties to cover the carbon contents of imported products.

Concluding remarks [2]: a clear need to define comparable climate efforts

- To discipline the use of unilateral trade measures at an international level
 - The Bali Action Plan calls for “comparability of efforts” towards climate mitigation actions only among industrialized countries.
 - However, lack of the clearly defined notion on what is comparable has led to diverse interpretations of the concept of comparability. Some industrialized countries have also extended the scope of its application beyond industrialized countries themselves, attempting to impose unilateral trade measures against other trading partners to address their own competitiveness concerns.
 - Such lack of the common understanding will lead one country to define whether other countries have made comparative efforts to its own. This can hardly be objective, and in turn leads one country to misuse unilateral trade measures against other trading partners to address its competitiveness concerns.

Concluding remarks [3a]: the importance of defining the comparability of climate efforts

- The inclusion of such trade provisions is widely considered the “price” for passing any U.S. legislation capping its greenhouse gas emissions. If such measures became law and were implemented, trading partners might choose to challenge U.S. before WTO.
- A case like this is likely, and **leading developing countries appear to be comfortable with WTO rules and institutions defending their interests in any dispute that may arise over unilateral trade measures.**
 - The top Brazilian and Chinese officials consider the WTO as the proper forum when developing countries are required to purchase emission allowances in the proposed U.S. cap-and-trade regime.
 - Reinforced in the Political Declaration of the Leaders of Brazil, China, India, Mexico and South Africa (the so-called G5) in Sapporo, Japan, July 8, 2008 that “in the negotiations under the Bali Road Map, **we urge the international community to focus on the core climate change issues rather than inappropriate issues like competitiveness and trade protection measures which are being dealt with in other forums**”.

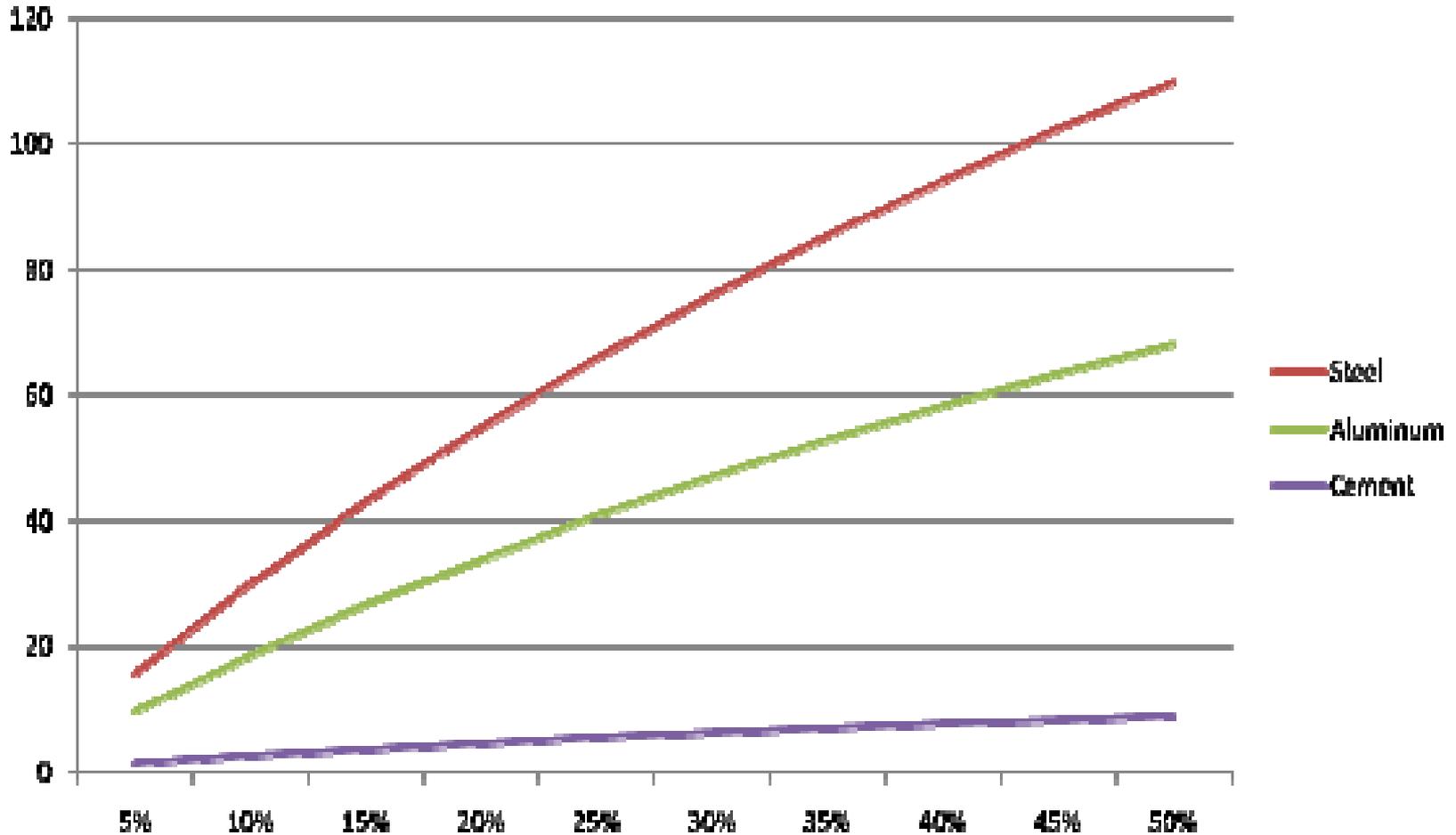
Concluding remarks [3b]: the importance of defining the comparability of climate efforts

- However, the point is that if a case like this really happens before a WTO panel, that panel would likely look to the UNFCCC for guidance on an appropriate standard for the comparability of climate efforts to assess whether that country has followed the international standard when determining comparability. Otherwise, that WTO panel will have no choice but to fall back on the aforementioned Shrimp-Turtle jurisprudence, and would be influenced by the fear of the political fall out from overturning U.S. unilateral trade measures in its domestic climate legislation. If the U.S. measures were allowed to stand, that would undermine the UNFCCC's legitimacy in setting and distributing climate commitments between its parties (Werksman and Houser, 2008).
- Therefore, as strongly emphasized in both my academic writings and my media interview in *New York Times*, there is a clear need within a climate regime to define comparable efforts towards climate mitigation and adaptation to discipline the use of unilateral trade measures at the international level. If well defined, that will provide some reference to WTO panels in examining cases related to comparability issues.

Concluding remarks [3c1]: the importance of defining the comparability of climate efforts

- Indeed, defining CCE can be to China's advantage. Why?
- China's abatement efforts to date just receive **CHEAP APPRECAITION**: U.S. Climate Envoy praises China's efforts but urges more.
- But if CCE is defined, then many abatement efforts China have been taking can be converted into the corresponding equivalent carbon allowance prices under U.S./EU ETS.
 - If such an equivalent is higher than prevailing U.S. allowance price, there is no rationale to impose carbon tariffs on Chinese products.
 - If it is lower, then the level of carbon tariffs is only a differential between such an equivalent and prevailing U.S. allowance price.
 - Export tariffs (10-15%) applied in China on its own in 2006-08 are equivalent to EU quota prices of 30-43 €/tCO₂ for steel and 18-26 €/tCO₂ for aluminium (IDDRI, 2009).

EU ETS quota price equivalent at various level of export taxes in China, €/tCO₂ (IDDRI, 2009)



Concluding remarks [3c2]: the importance of defining the comparability of climate efforts

- Carbon tariffs impact disproportionately on energy-intensive manufacturing – much more on China than on India
 - Manufacturing contributes to 33% of China's GDP relative to the corresponding 16% for India and China's GDP is 3.5-4 times that of India.
 - Thus, in volume terms, energy-intensive manufacturing in China values 7-8 times that of India
- This raises the issue: whether China should hold the same stance on this issue as India as it does now?

Concluding remarks [4]

- Cooperative sectoral approaches to advancing low-carbon technologies and/or concerted mitigation efforts in a given sector at an international level
- If the U.S. and other industrialized countries really want to persuade developing countries to do more, they should first reflect why developing countries are unwilling to and cannot afford to go beyond commitments on policies and measures. That will require industrialized countries to seriously take developing country's legitimate demand that industrialized countries need to
 - demonstrate that they have taken the lead in reducing their own GHG emissions,
 - provide significant funding to support developing country's climate mitigation and adaptation efforts and to
 - transfer low or zero carbon emission technologies at an affordable prices to developing countries.
- Industrialized countries need to provide positive incentives to encourage developing countries to do more. Carrots should serve as the main means. Sticks can be incorporated, but only they are credible and realistic and serve as a useful supplement to push developing countries to take actions or adopt policies and measures earlier than otherwise have been the case.

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