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Critical Analysis of Border Carbon Adjustments

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Abstract

The paper seeks to refute the imposition of Border Carbon Adjustments (BCA) both from theoretical and legal perspectives. Not only are BCAs expected to defy WTO norms but they are also against the spirit of Kyoto and post-Kyoto protocols. These taxes are expected to become a tool of protectionism and will be against the spirit of free and fair trade. In the current scenario when most of the economies have recognised the need to undertake climate change measures, such adjustments on imports will only serve to discriminate against a subset of countries, mostly developing. In addition, the design of such taxes is not only extremely complex leading to an element of arbitrariness but the corresponding data requirements are humongous. It is highly unlikely that the developing countries will have the resources to collect such complex data sets.

Moreover, BCAs will also face stiff opposition on grounds of violating the WTO norms. It will be very difficult for the implementing countries to comply with National Treatment and Most Preferred Nation clauses for the WTO to condone them. That said, the devil lies in the details and unless and until these are imposed and face opposition in WTO, it is hard to reach a conclusion with definiteness.

Introduction

United Nations Framework Convention on Climate Change (UNFCC) led Kyoto Protocol[1], adopted in Japan 1997, aimed at committing its parties to internationally binding emission reduction targets. Recognizing that developed countries have been degrading the environment through greenhouse gases (GHG) emissions since the past 150 years, it placed a greater burden on developed nations under the principle of "common but differentiated responsibilities" (CBDR). The detailed rules for the implementation of the Protocol were adopted at COP 7 in Marrakesh, Morocco, in 2001, and are referred to as the "Marrakesh Accords". Its first commitment period started in 2008 and

[1] For a detailed discussion on Kyoto Protocol, refer to http://unfccc.int/kyoto_protocol/items/2830.php

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ended in 2012 whereby, several developed countries such as EU, Croatia, Australia, New Zealand, Russian Federation, Ukraine, Norway and Iceland had ratified to decrease their emission levels ranging one to ten percent to 1990 levels.

Carbon abatement measures by developed nations were undertaken in line with CBDR principle to mitigate the damage done by GHG emissions to the environment, whose dire consequences were evident through global warming. However, they were quickly followed by concerns of carbon leakage and competitive issues which put the domestic industries in a disadvantaged spot. A remedy to the problem was seen in measures such as BCAs. BCAs are the taxes which are imposed on goods being imported from countries which do not have comparable environmental regulations as the importing country and can also take the form of exempts or reimburses on exports. Imposition of BCA requires the fulfillment of twin objective, of conforming to CBDR and being WTO legal apart from various theoretical refutations.

In this light, the paper seeks to highlight the various issues involved in the imposition of BCAs, which EU, USA and other developed nations are mulling to implement against their emission abatement efforts.

Theoretical and empirical evidence

The concept of border tax adjustment is based on the destination principle of taxation, according to which a product is taxed where it is consumed, rather than where it is produced. Moreover it a process and production method tax, whereby the tax is imposed on the method of production rather than the good itself. The main idea is to induce companies to adopt carbon efficient technologies for reducing the amount of carbon emitted during the production process. GATT allows WTO Member countries to apply border tax adjustments, provided certain requirements are met, discussed henceforth.

The tax on imported goods is mandated to be equivalent (and not in excess) to a tax placed on domestically produced ‘like’ goods and will be used to rebate exports in order to make them globally competitive. The design of the BCA will be crucial in deciding whether these will be WTO legal and not invite retaliatory action by other countries. In addition, it will be imperative for the countries to

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prove that other member nation is not taking comparable steps due to which the threats of carbon leakage and loss of competitiveness is posing a significant risk.

The argument of carbon leakage arising from loss of competitiveness is also accompanied with another justification. It is argued that such taxes will encourage the developing countries to undertake requisite measures with respect to climate policy and therefore increase the number of countries committing to climate change.

The third argument is slowly losing its stand as the initial discussions on BCAs were based on the Kyoto protocol period, whereby apart from a handful of countries, other member nations had not made any commitment towards climate change in any form. However, the recent Paris agreement has witnessed ratification by more than 190 members who are pledging to undertake carbon abatement measures. These include not just the developed but also a number of developing nations such as India and China who are the major targets of BCAs. According to the Carbon Pricing report of World Bank, 2015, about 40 national and 20 sub-national jurisdictions which account for almost 25 per cent of greenhouse gas emissions are putting a price on carbon. Several countries such as India, Mexico, and South Africa have carbon taxes imposed or implemented and several others such as China, Kazakhstan have ETS in the pipeline. China which is often accused of not undertaking commensurate climate change measures has implement pilot ETS in seven of its major provinces. Its coal use plateaud in 2014 and it has banned coal plants in three key economic regions. Moreover, it has the installed the largest solar power capacity[2].

How the BCAs be justified in a world where every country is willing to commit and work towards reducing the global warming is unclear.

The primary argument of carbon leakage is based on the reasoning that if only a handful of countries impose penalties on carbon emissions (mostly in the form of cap and trade system) unilaterally and these are not matched by other nations then it will lead to a shifting of market and relocation of production facilities in the latter set of countries. This will give rise to what are referred

[2] Climate Action in China over the Last 5 Years (2016, March). Retrieved from http://www.wri.org/resources/data-visualizations/climate-action-china-over-last-5-years.

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to as carbon heavens, offsetting the reduction in emissions achieved by carbon-constraining countries. In this line of argument global environment is taken as a common public good and negative or positive impacts are borne by the world as a whole, therefore countries can in fact take actions which are aimed at the greater good of the environment. This line of argument assumes a loss of markets to non-carbon constraining nations or relocation of industries. However, it is flawed in its own merits as it ignores the gestation time required for setting up of such large scale industries and implicitly assumes that other nations have the over-capacity to satisfy the increased demand in the short run itself.

Besides, even though the carbon constraining countries may put border taxes they will still not be able to monitor the carbon emitted during domestic production in non-carbon constraining countries (selected issues). For instance, almost 87% of China's steel production is for domestic production rather than for export purposes. Secondly, even if border taxes are placed, the imposing countries will have to track the entire supply chain so that products do not enter their jurisdiction through mere change in import destination which is in itself a very complex task (A. Cosbey 2008).

Studies based on the EU ETS[3] (emission trading system) and European carbon taxes provide limited empirical evidence in support of carbon leakage. These have failed to find any support in favour of carbon leakage in steel, iron and aluminium industries in the EU during different phases of ETS implementation. According to a paper by Reinaud (2008a), there is no any change in the trade flows or production patterns for cement products, iron and steel, refineries or aluminium industries in EU during the first phase of ETS. Had the argument of carbon leakage held ground, the impact of ETS could have been seen through rising imports of cheaper products from unconstrained regions, and fewer exports to the rest of the world. Another paper by Arlinghaus (2015), which reviewed the existing empirical literature on carbon abatement measures, reports that none of the studies could

[3]. EU ETS was implemented in 31 states, (28 EU and Iceland, Norway and Liechtenstein) was the cornerstone of its carbon mitigation efforts. It is based on a cap and trade system whereby every company either buys or receives emission allowances and covers about 11,000 power stations and manufacturing units. Moreover, it covers about 45% of EU's greenhouse gas emissions. It has three phases, two of which, 2005-07 and 2007-2012 have expired. The third phase 2013-2020 is underway. "The EU Emissions Trading System", Retrieved from https://ec.europa.eu/clima/policies/ets_en

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substantiate the claim of negative competitiveness effects on profits, employment, output or trade outcomes leading to carbon leakage.

The second argument concerning the loss of competitiveness of domestic industries arises from the additional cost burden which the carbon-intensive industries have to bear vis-a-vis their counterparts in other non-carbon constraining countries. A reduction in profitability both directly due to increased carbon abatement costs and indirectly due to loss of markets will lead to relocation of industries in the long run. The loss of industries impacted by carbon taxes are those which have a significant share in many economies and the loss of ensuing jobs is a cause of concern. In this scenario it is extremely difficult for the bureaucracy to ignore the well-being of its own stakeholders and single-mindedly work towards carbon reduction. However, some domestic producers might not even be at a loss of competitiveness because of an insignificant share of exports in their total production (McLure, 2014).

Moreover, empirical evidence fails to find evidence in support of this argument as well. A study by Anger and Oberndorfer (2008) compares firms in Germany which were practically exempt from payments under the EU ETS (through over-allocation of free emissions permits), to firms which were required to purchase additional permits at a cost, during the first phase of EU ETS. It was found that whether the firms were over-allocated free emissions permits, or whether they were short of emissions permits and had to purchase additional permits at a cost, either way, it did not have a significant impact on firm revenues and employment. A similar finding was reported for UK full Climate Change Levy (CCL) which did not impact the competitive position of the UK manufacturing sector (Martin, 2014). Moreover, impact of CCL on exit decisions of firms was also not found to be significant.

In all the studies, the results were consistent, however, with the fact that carbon abatement policies have been successful in inducing innovation that offsets part of the compliance cost. It has been long observed that costs are not the only basis of competition among firms but the overall efficiency of converting various inputs (including knowledge) into high-value products and services. Dynamic effects of carbon prices can induce firms to discover and implement cost-effective energy

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efficiency measures moving them closer to the efficiency frontier. It may stimulate industrial innovation, which according to the Porter Hypothesis might even increase competitiveness. It has also been observed that producers have not borne the entire cost of carbon abatement and have been able to pass through the costs to customers fairly easily. Market structures such as monopolies, cartels further simplify the pass through of costs and industries such as cement, steel etc. are in many jurisdictions cartelised Arlinghaus (2015). For instance, the cement industry in UK is to a large extent monopolised.

Legal issues:

The arguments for establishing imposing BCAs are mired with a number of issues spanning from legal, political to practical infeasibility. Having started facing immense opposition from the developing countries which argue that these are protectionist policies aimed at creating market barriers, whether WTO will condone such taxes can only be seen when these are actually implemented.

Border tax adjustments concern Article II and III of GATT, whereby a WTO member can impose a charge on imported products which is akin to a charge levied on 'like' domestic products. The first problem is encountered in the definition of 'like' products itself. As per the GATT/WTO guidelines, two products will be treated as like products according to the following criteria's:

a) the products' properties, nature and quality, i.e. the physical properties of the products;
b) the products' end-uses in a given market, i.e. the extent to which the products are capable of serving the same or similar end-uses;
c) the international classification of the products for tariff purposes (say, the HS classification);
d) consumers' tastes and habits, i.e. the extent to which consumers perceive and treat the products as alternative means of performing the same function(s) in order to satisfy a particular want or demand.

Though the definition of like products has included important characteristics, it still does not provide clarity in terms of carbon intensity and whether products can be differentiated on the sole

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basis of the source of energy. For example, whether an aluminium product produced using electricity sourced from solar energy will be treated 'like' the aluminium product whose predominant source of electricity was coal is grossly unclear. Therefore, the carbon content of fuels also needs to be taken into account. For instance, coal (a fossil fuel with high carbon content) fired heat production results in about twice the carbon dioxide emissions per unit compared to heat produced by natural gas (Das 2011). Hence the decision of whether the imported products are 'like' the domestic products will have to be done on a case-by-case basis.

Secondly, BCAs are indirect taxes and there is still ambiguity regarding the treatment of indirect taxes imposed on inputs which are exhausted in the production process. Carbon tax is imposed on the consumption of energy during the production process but is not incorporated in the end-product. The only reference can be found in the US 'Superfund case' in which US had imposed border taxes on certain types of chemicals as well as on products which used those chemicals as imports. In this case, WTO had rules in favour of border taxes, stating that inputs can be adjusted at border. But even in this case it is not sure whether those chemicals were exhausted during the production process or were physically present in the end product (Das 2011).

Another issue of concern is the adherence to the National Treatment provisions which requires that imported products should not be taxed directly or indirectly in excess of those applied on 'like' domestic products and internal taxes or other internal charges are not applied to imported or domestic products in a manner that affords 'protection to domestic production'. Henceforth the first requirement will be referred to as the fair-taxation and second as the non-discriminating principle.

In order to ensure that the fair-taxation principle clause is not violated and products are not charged in excess of their carbon intensity, the imposing country will have to ascertain the exact amount of carbon intensity. However carbon intensity differs according to the production process, feedstock, energy sources and technical efficiency. Apart from the possibility of the calculation being complex and arbitrary, another problem arises with the fact that these are destination based taxes and products are taxed in the area of consumption not the region of production. Therefore the tracking of production chain and being able to accurately monitor their carbon footprint both in production and

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transportation, in the absence of adequate data collection will create administrative hassles. Mostly BCAs are aimed at five products, namely steel, aluminium, paper, chemicals, and cement, but these along with their downstream products can increase the purview of the taxes to thousands of items. Without succumbing to the allegations of being arbitrary and unjustifiable, carbon adjustments will have to be based on actual carbon content. The data requirements for calculating the carbon intensity of every product which crosses the border is huge and every country may or may not possess the capacity to collect such information (A.Cosbey 2008, McLure, 2014).

To overcome the problem of charging imports in excess of domestic products, it has been advised to base these on the pre-dominant method of production in the importing country. It will basically calculate the carbon content of the product had it been produced in the importing country. However, this may still violate the first clause even if one commodity is taxed in excess. The only case where the tax will not tax the import unfairly will be when they are based on the best available technology. In this case, the most carbon-inefficient imported X will have to bear a tax equal to that borne by the most carbon-efficient domestic X. This method will thus discriminate against the domestic producers which will not be acceptable to a majority of those who end up paying more carbon taxes than the importers (Das 2011).

In addition, it will also be imperative for the imposing country to take into account the carbon taxes already levied on imported products (A.Cosbey, 2008). For instance, the carbon tax in India is about Rs 400 per tonne, equivalent to one-fifth of the mining cost. Moreover, there is also in place a system of renewable purchase obligations put on all electricity distribution companies and also captive producers, adding to this the rising excise duties on petrol and diesel products, the de facto carbon tax amounts of $12 per tonne[4], which is at par with global standards. In this case a tax on exports from India in the name of less stringent environmental standards will amount to double taxation and will put undue pressure on Indian industries. Similarly other nations have also started to implement various climate change measures. If these are not taken into account while imposing BCA,

[4] India's de facto carbon tax is excessive (2017, Feb 08). Retreived from http://www.livemint.com/Opinion/3s3lXBCY4Ixi0JeB5N9rYL/Indias-de-facto-carbon-tax-is-excessive.html

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it will likely invite opposition from these countries because the choice of policy action can differ among countries and this should not invite penalty from other members.

Moreover, any border adjustment will, in fact, be based on whether industries from other nations are able to achieve comparable level of carbon reductions. However, producers in developing countries may not be in a position to adopt equally efficient technologies due to lack of finance and technological know-how. In addition, even among developed nations, due to the differences in policy actions, the reductions can vary and if a tax is placed without taking into account all the efforts, may implicitly imply that nations lose the choice over policy-mix and be compelled to follow the footsteps of nations which have been successful in achieving the highest amount of reductions (Brewster, 2009)

Further, if a simple carbon tax is imposed on industries in both the developed and developing countries then will be against the spirit of the Kyoto Protocol and will put undue pressure on the developing countries. For instance, in case of the steel industry, the quantum of carbon released from England for instance (which started its industrial revolution from 18 century onwards) cannot be treated at equal footing with carbon released from developing nations. It was in this regard that it was decided that developed nations will shoulder a greater responsibility in reducing carbon emissions. Any steps in this regard should then, ethically, not be made reciprocal.

The second clause of National Treatment provisions, which requires that the taxes be applied in a non-discriminatory manner will also come under lens as the differences in technologies among member nations will feature as differences in carbon intensities. If then, border adjustments are based on actual carbon content then the taxes on imports will end up being higher than for domestic directly competitive or substitutable' products. As highlighted above, it is not necessary that many of the developing countries have access to the kind of capital needed for investment in carbon saving technologies and should be provided aid by developed countries to upgrade their technological base and not be penalised for lacking the resources to do so.

A separate issue which is likely to face border adjustments is that of 'Most Favoured Nation' clause. Under this clause, if a tax is imposed on imports, then it must be imposed on the imports from

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all the nations and not imposed selectively. This cannot be fulfilled by BCAs because these will be imposed only on imports of nations which are not undertaking comparable steps towards climate change. In this scenario, most of the developing countries will the find themselves being discriminated against.

It can also be argued that in a cap and trade system, domestic producers are also given the flexibility to ‘‘bank or borrow’’ greenhouse gas credits. For instance, a domestic producer who did not want to buy emissions credits this year could ‘‘borrow’’ from future years’ credits at a certain interest rate. This gives domestic producers significant flexibility in determining how to allocate the costs of GHG emissions reductions over several years. Importers are not given the bank or borrow option; they have to pay for GHG emissions on an annual basis (Brewster, 2009).

The only legally viable option for BCAs to be justified is under the General Exceptions’ provisions enshrined in Article XX of the GATT, which allows taxes to be placed nevertheless if they satisfy the requirements included in the chapeau of Article XX. These measures, if violate the Article II and III, can still be adopted if they are necessary to protect human, plant or animal life. Or are relating to the conservation of to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption. It is unlikely that BCAs can be justified even as exceptions, because as highlighted above, any country implementing such taxes will have to justify that other countries are not undertaking comparable climate change initiatives or are not implementing any policies whatsoever. Given that majority countries under the sun are undertaking climate change initiatives; this is likely to pose a huge problem for BCAs.

Secondly, because the developed countries still feature as the top emitters of greenhouse gases, it will be difficult for them to argue that carbon emissions from other nations are doing more harm to the environment. Being a trans-boundary issue, emission from any nation will inflict equal amount of damage to the environment. Therefore, BCAs should not be able to qualify even under the exception.

Political ramifications

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Today, many developed nations have started to lose their market to developing countries such as India and China which has impacted their economy and job market adversely. An example of the same can be the steel industry of EU which lost its market to China (primarily from 2014 onward) in wake of the excess capacity established by the latter and has been struggling to maintain its position as a global producer. Given the anti-dumping investigations opened by EU on China in the past two years, BCAs can come in handy for nations which have started to lose their positions as global leaders. A major concern that these measures will start acting as vehicles of protectionism is of paramount importance. A study conducted by Dhar and Das, 2012, finds that BCA imposition by EU on imports from India will adversely impact about 82-84% of latter's imports. These items are not only important exports to EU but also globally. Not only this, the calculations for emission levels and subsequent BCAs are likely to be highly complex and arbitrary. Moreover, as highlighted above and in many other cases, the industries which are likely to come under the lens are already facing stiff scrutiny in the anti-dumping area.

Moreover, reciprocal legislation can be enacted immediately, while the WTO consistency of a measure can take years to litigate. For instance, if the United States adopted a carbon tariff, other countries could then also adopt a carbon tariff based on different parameters. For instance, China could base its carbon tariffs according to the per capita level of emissions of the exporting country. This would then bring under its umbrella both U.S. and the EU. Similarly, India could adopt a baseline that gave nations that had already contributed significantly to the current stock of GHG emissions fewer emissions in future years. Such a process would then witness a large number of countries imposing such border adjustments hindering free trade among nations.

Conclusion

The BCA imposition by EU is being contemplated as part of the post-2012 ETS whereby emission allowances will be auctioned rather than been allocated for free, which is expected to increase the cost burden of industries. However, not only has the quantum of allocations been in excess in the first two phases but the plan to auction emission allowances has also been delayed. During this period, the world has been witness to climate change attempts by a large number of developing and developed nations alike. Though, a number of countries such as the EU, New

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Zealand, Australia started imposing carbon tax on major carbon emitting industries in a dedicated manner for addressing environmental concerns. However, the burden of such taxes on individual states is under the lens. Being a group of countries, the individual responsibility levels of the EU countries may not be high enough to impose a real cost of abatement initiatives and further may not be as high as the target of the group taken as a whole. Further, USA which is still the second largest GHG emitters had indicated its intention not to ratify the protocol. Though some states in US are still undertaking climate change initiatives these might not be rigorous enough to impose BCAs on imports from other non-carbon constraining nations.

Coupled with this, all arguments to support BCAs have failed in one way or the other and the imposition of BCAs is likely to create more trouble than benefits. These will not only face legal and administrative hassles, the risk of reciprocal action by other nations will threaten the entire foundation of free trade. That said, the final verdict on BCA will only be out when a case comes under WTO dispute settlement, the efficiency of the filing country in terms of BCA design will then determine whether WTO condones it or shuns it. Till then in light of the available literature, the paper has failed to find any ground on which BCA can be imposed in a WTO and UNFCC world.

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