

Carbon Standards and Carbon Labelling: An Emerging Trade Concern

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Introduction

The current debate on climate change and its linkages to trade is rapidly gaining global attention. Thus it is reasonable to expect that the focus on carbon leakage and border tax adjustment will only intensify in the future. Carbon leakage is said to happen when production of carbon intensive products migrates from countries which have measures to reduce emissions to countries where there are no such measures. Therefore, border tax adjustment is suggested when carbon intensive products are imported from countries with no carbon emission regulation so that carbon leakage can be controlled. However, the legitimacy of border tax adjustment is questionable as such government interventions may have a trade restricting effect. On the other side, individual consumers are free to include emissions criteria in their buying decisions. Private carbon standards and labelling can be used to introduce such criteria.

Private standards and labelling are believed to affect exports, particularly from developing countries. For example, there is at present no legally binding global regulation to stop imports on the basis of labour standards, yet exporters from developing countries often find it necessary to get their products certified as not using child labour in their production. This certification is often an expensive process. The experience of the Indian carpet industry is a case in point. In the early 1990s, a campaign against child labour led to a situation where Indian carpets, often produced by poor families, were on the verge of being boycotted by the European market. However, the boycott was averted when the Indian government stepped in and launched a labelling scheme that the exporters could afford and the importers could accept.

Exports from developing countries are also affected considerably by the eco-labelling in the European Union and the United States. By analysing the products life cycle, eco-labelling tries to ensure that the exports from a country are harmless for the consumers and environment of the importing country. According to Teisl et al. (2002), knowledge about the environmental attributes of products has become increasingly important to consumers. Furthermore, Wienmann (2007) found that product standards introduced by companies and NGOs are gaining importance, as there is a price premium for the labelled products. Several governments and NGOs have been supporting various eco-labelling programmes,

and efforts have also been made to standardize environmental labelling schemes at international levels. Thus it might be reasonable to expect eco-labels to have a growing importance in the future. This is also confirmed in Figure 1, which shows that the eco-labels' press coverage has increased significantly during the period from 2000 through 2010.

With the growing concern over climate change (see Figure 2), it is expected that carbon labelling or eco-labels that take into consideration carbon emissions will gain in significance. Although such labelling may not be made mandatory by governments, a proliferation

Figure 1. Frequency of yearly press hits on the search phrase "Eco-Label"

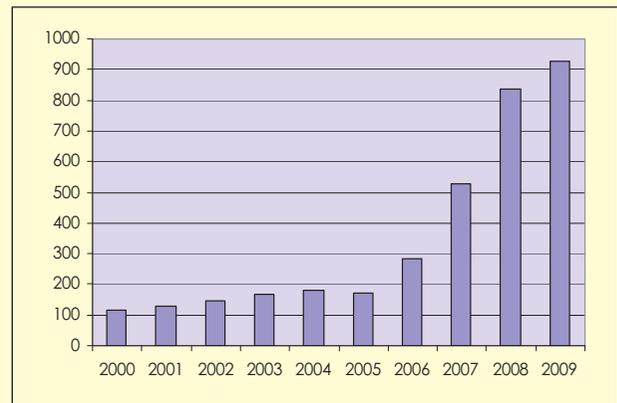
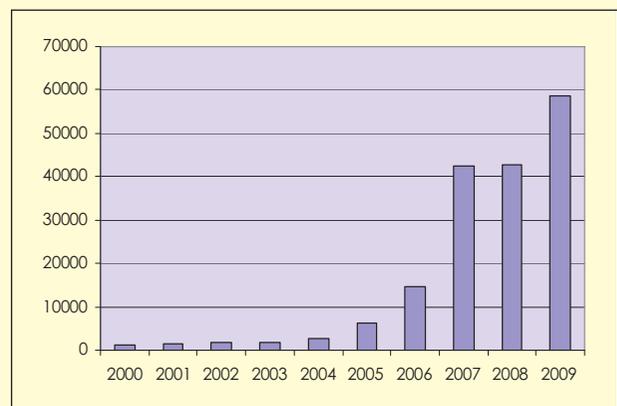


Figure 2. Frequency of yearly press hits on the search phrase "Carbon Emissions"



Source: Data retrieved from Factiva.

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of private labels may have a significant impact on the export prospects of developing countries. It may be noted that several global fora including IPCC (2007), as well as experts like Stern (2007) and Garnaut (2008) advocated measures like product labelling and mandatory disclosure. According to such views, adjustment towards a low emissions economy may be easier when both price and non-price signals are used to reduce demand for relatively carbon-intensive products.

Carbon Standards and Labelling Initiatives

Carbon labelling provides information about a product's carbon footprint,¹ and thus has the potential to facilitate consumer participation in climate change mitigation. Product labelling can have a significant effect on consumer behaviour and preferences. According to a survey undertaken by the United Kingdom Carbon Trust² in 2006, about three-quarters of United Kingdom consumers were concerned about climate change, while two-thirds of them indicated that they would prefer products with a low carbon footprint.

In the United Kingdom, it is already a part of the Government's policy to encourage consumers to buy products with lower carbon emissions. In 2007, the Carbon Trust and Government Department for Environment, Food and Rural Affairs commissioned the British Standards Institute to develop a comprehensive carbon footprint methodology that would calculate the full life cycle of carbon emissions from goods and services. This methodology, referred to as Publicly Available Specification (PAS 2050), was launched in October 2008. Furthermore, the Carbon Trust introduced a carbon reduction label based on PAS 2050 in partnership with several companies.

Publicly Available Specification 2050

PAS 2050 is a specification for the assessment of the life cycle greenhouse gas emissions of goods and services. It provides an agreed method of assessing product GHG emissions with links to existing (ISO 14040-44, 14064 and 14025) standards, IPCC, etc.

In developing the PAS method, consideration is given to how it may be applied in practice. Areas of focus include:

- *Existing evidence on goods and services that have the most significant environmental impacts and hence are priorities.*
- *Verification of the method – the method lends itself to verification in a way that is feasible for those organizations using it.*
- *The suitability of the method for use in existing business sustainability-focused supports/toolkit, e.g. EMS, Green Supply Chain Management, Sustainable Procurement and Eco-design.*

Source: <http://www.bsigroup.com>

As of now, there is no internationally agreed methodology for calculating the carbon footprint of a product. However, the Carbon Trust is reported to be working with the International Organisation for Standardisation and the World Resources Institute to develop a universally accepted standard for measuring embodied carbon emissions. In response to concerns about the high cost of implementing PAS 2050, the World Business Council for Sustainable Development is developing a simplified low cost standard to achieve widespread adoption by businesses generally.

Carbon labelling schemes have been introduced in several other countries. For more information see the "Summary of global carbon labels" by Stancich (2008).³

Food Miles – a Myopic Approach?

In some countries, the idea of so-called "food miles" has become popular primarily due to private initiatives. Under such initiatives, consumers are informed about the distance various items have been transported to reach the retail store. The idea is to encourage consumers to reduce food miles by buying local food to minimize energy usage. The food miles concept originated in the United Kingdom in the early 1990s and has been supported by a range of environmental, community and farmer groups including the World Wildlife Fund and Soil Association. Two major UK retailers, Tesco, and Marks and Spencer, have already adopted the concept as they now place plane stickers on fresh produce that has been air freighted from abroad. The concept is gaining momentum in other countries as well. For instance in the United States, a group known as the "locavores" gained significant popularity by encouraging people to eat food grown or harvested within a 100-mile radius of their home.

Proponents of food miles in the United Kingdom have particularly focused on the carbon intensity of air transport and recommend consumers to choose purchases that reduce food miles. Moreover, the Soil Association of the United Kingdom, which provides certification for organic foods, has suggested that air freighted organic food should be refused organic certification. However, due to a possible negative impact on consumer demand for organic food imports, the idea has attracted significant criticism. As a result, organic products are allowed to be air freighted provided they meet the Ethical Trade or Fairtrade Foundations' standards.

Prima facie, the idea of food miles appears to be justified as transportation is a highly energy intensive activity. However, the issue is more complex. Food miles indicate only the part of carbon emitted in the process of transportation, thus ignores emissions from the other phases of the product's life cycle. For instance, it is possible for a product grown in Africa to remain less carbon intensive than the equivalent product grown in Europe even after it has been transported by air if carbon intensities of the production processes in Europe are much higher than those in Africa. Supporting this view, Appleton (2009) found that based on a life cycle analysis, cut roses grown in Kenya for the British market are 5.8 times more carbon efficient than Dutch greenhouse flowers even after accounting for emissions caused by air freight.

¹ The carbon footprint of a product is the carbon emission across the supply chain for a unit of a particular product.

² The Carbon Trust is a non-profit company with the mission to provide specialist support to help business and the public sector cut carbon emissions, save energy and commercialize low carbon technologies.

³ Available at www.climatechange.org.uk.

From an international trade perspective, food miles present additional concerns. By hampering international trade flows, the food miles initiative ignores the role international trade plays in facilitating economic development and global poverty reduction. For example, the imports of food products in Europe are supporting millions of farmers and their families in developing countries. There is also good reason to believe that the food miles campaign is being used as a form of trade protection as most interest in the food miles label has been in the European Union and the United States where agriculture remains highly subsidized. To summarize, not only may food miles be disputed with respect to climate change mitigation, but it may also have an adverse social and economic impact on food exporters in the developing world.

Food Miles versus Carbon Labelling

It has often been argued that carbon labelling is a better alternative than promoting the concept of food miles to address the issue of carbon emissions in international trade (e.g. Muller, 2007). Major exporters of agricultural goods from Australia and New Zealand, which are far from their exporting markets, also subscribe to this view (Hogan and Thorpe (2009)). Moreover, the European Union is reportedly moving toward country of origin labelling on all food products. The issue of food miles and country of origin labelling is rising in importance in the United States as well (Saunders and Hayes, 2007). Thus, it appears that promotion of carbon labelling may be a better option for consumers who wish to contribute to mitigation of carbon emissions.

However, some concerns remain. Carbon labelling involves significant administration and transaction costs along with the issues of quality assurance. For instance, Gandhi (2006) pointed out that the compliance with voluntary eco-labelling schemes in the footwear industry has raised the cost of Indian footwear by approximately 33 per cent. The cost of labelling is also likely to vary according to the methodology or standards adopted. A complex methodology to measure carbon footprint would increase the cost of data collection and calculation of the carbon footprint as well as the cost of verification. However, a simpler methodology would mean that it would be less reliable and increase the possibility for loopholes allowing relatively more emission-intensive products to pass as low carbon products.

Furthermore, it would also be almost impossible to have a measure of carbon emissions of products on a life cycle basis. It may be possible to measure emissions of a product up to the factory gate. But emissions due to transport from the factory gate to the consumer would be difficult to measure as they will vary not only from market to market but also based on the mode of transport. Measuring emissions due to disposal would be even more difficult as not even the consumer has control over the disposal process.

It should also be noted that there is no guarantee that the promotion of carbon labelling will automatically stop the promotion of food miles.

WTO Compatibility of Private Standards

Standard setting and labelling activities come under the Technical Barriers to Trade (TBT) Agreement irrespective of whether they are mandatory or voluntary, though the applicable provisions are different. The TBT Agreement

covers standards set by central government bodies, local government bodies as well as non-governmental bodies. There is, however, no consensus on whether standards or technical regulations on non-product related production and process methods and private labelling schemes will fall within the purview of the agreement. As was seen in the United States Superfund case, if the production and process methods are detectable and embodied in the product itself, then it may come under the agreement. However, carbon emissions are not detectable and measuring them is also a difficult task. In the United States Shrimp Turtle case, the import ban was examined under Articles XI and XX of GATT and hence does not shed any light on the applicability of TBT.

It is, however, debatable whether activities of organizations like the Soil Association, Bio Suisse, Tesco, and Marks and Spencer should be considered to be standardizing or simply marketing or strategic issues. Many World Trade Organization (WTO) members are not in favour of standards based on non-product related production and process methods and hence such standards have not been allowed to accede to the TBT Code (Appleton, 2009). An interesting case is that of Forest Stewardship Council. It is widely recognized by many WTO members and its standards and labels are recognized globally. It is also listed by the World Standards Services Network as an international standardizing body. These private standards and labelling schemes are possibly taking advantage of some loopholes in the TBT Agreement but essentially defeating the very purpose of TBT as they are not guided by any regulations and can be trade restrictive.

Conclusions and Key Policy Implications

Carbon standards and labelling may emerge as significant trade concerns in the years to come. Although standards, labelling and air miles currently are more prevalent in food items, they are likely to become relevant for non-food items as well in the near future. Much of the demand for carbon standards and labelling is fuelled by the fear that producers in developed countries will lose competitiveness and outsource their production to developing countries.

For developing countries, the adoption of carbon labelling is a matter of concern. Even though UNFCCC, IPCC or experts like Nicholas Stern favour the adoption of carbon labelling, they might not have considered the impacts that such schemes can have on developing countries, particularly small producers and poor people. Complying with carbon standards will require an estimation of the carbon footprint of all suppliers. For many small producers, there may not be fixed suppliers. They might source their supplies from the market without any knowledge of the original suppliers. This would mean that complying with standards or measuring carbon footprints will be extremely difficult.

It is possible to argue that most exports from developing countries will have lower emissions because a significant part of the products are not energy intensive products and they are made by small producers. For instance, in India, which has a relatively diverse industrial structure for a developing country, the share of energy intensive products in exports is less than 10 per cent. China is an exception in this regard. Yet developing countries will have difficulties as the costs of compliance would be very high, particularly for the small producers.

A growing number of private standards may also confuse consumers, thereby diminishing their intended effect. However, their trade-restrictive effect will remain. When the TBT Agreement was signed, member countries may not have realized the extent to which private standards may proliferate. Given the reality, countries may choose to re-examine the question and seek alternative ways of dealing with such standards. WTO members have already been discussing the issue of private standards and recognized the need to regulate them so they do not restrict trade unnecessarily.

Developing countries may take note of the Indian experience of its own standard setting in the carpet industry. They may take similar initiatives and develop appropriate methodologies for their products in case they face carbon-related barriers in their export markets. Such methodologies may be simpler and cheaper to administer and at the same time take the reality of their domestic market and production structure into consideration.

The above discussion suggests that climate change and increased carbon emissions motivates both the public and the private sector to explore the potential of carbon standards and labelling schemes. As a consequence, developing countries are facing the threat of these measures being misused by developed countries to protect their own trade balances.

For policymakers in developing countries, a possible approach might be to proactively meet these challenges by themselves introducing carbon standards and labelling schemes. Potential benefits of such an approach are listed below:

- This brief argues that consumers have become more concerned about the environmental impact of products they are buying. By adjusting to these changing preferences, developing countries may increase their market share and/or possibly gain a premium on carbon labelled products.
- By pre-emptively meeting future regulations from developed countries, developing countries, with better knowledge of what is affordable for local producers would have a larger influence over the composition of the initiative.

- As in the case of the Indian carpet industry, developing countries may avoid being boycotted by developed countries due to low or uncertain environmental standards.
- Introducing a labelling initiative would possibly strengthen the developing countries' position in future global fora and negotiations.
- If communicated well, labelling based on the entire product life cycle may draw attention away from the misleading food miles initiative.

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