



TRADE AND CLIMATE CHANGE: EXPLORING THE IMPACT ON SOUTH AFRICAN BUSINESS

SUMMARY OF THE ROUNDTABLE DISCUSSION

There is growing concern that measures that have already been adopted, or measures that will be introduced by developed countries to mitigate climate change, could be trade distortionary and discriminatory, introducing new forms of ‘green protectionism’.¹ The Department of Trade and Industry (**the dti**), the Industrial Development Corporation (IDC) and Trade and Industrial Policy Strategies (TIPS) hosted a roundtable discussion to explore the trade and climate linkages for South Africa, with a specific focus on the risks and opportunities that arise for the private sector and the role of government in assisting business.

Leaders from key business sectors, in particular mining and petrochemicals, as well as government departments, the energy regulator, interest groups and non-governmental organisations (NGOs) attended the roundtable discussion. Three presentations providing background context for the discussion were shared. These included a presentation on South Africa’s position on the trade aspects of climate change by **the dti**, a presentation on South Africa’s vulnerability to green protectionism by TIPS and a presentation by the IDC on improving energy efficiency and reducing greenhouse gas (GHG) emissions in South African industries. This write-up provides a brief summary of the proceedings according to key themes discussed during the roundtable. It incorporates the contributions made by participants in providing examples of industry/sector vulnerability to existing/potential climate- or environment-related regulations and measures in international markets, as well as providing information on measures industries can take to reduce their carbon footprint.

The international trade and climate change context

The relationship between trade and climate change is a complex nature. Trade physically affects climate change both directly, through GHG emissions generated by transport, and indirectly, through trade-induced growth affecting production and consumption. Global warming impacts trade, notably through its effect on agricultural production. Furthermore, policies aimed at the mitigation of climate change affect trade and, at the same time, trade policies can be used to address climate change. Climate change policy debates and specific measures to which South Africa is vulnerable are shaped by United Nations Framework Convention on Climate Change (UNFCCC) and World Trade Organisation (WTO) negotiations. Whether trade matters related to climate change should be dealt with within the UNFCCC or the WTO remains a contested issue. On the one hand, global trade rules are established through the WTO and were not designed to deal with climate change matters. On the other hand, trade is not formally part of the UNFCCC agenda. However, the UNFCCC, and in particular the Kyoto Protocol, focuses on the economic and social consequences of climate change response measures (in defence of the principle that climate change measures should not constitute a

¹ This term refers to the justification of protectionist measures under the guise of addressing climate change and environmental goals.

means of arbitrary or unjustifiable discrimination). Developing countries advocate for trade and climate change matters to be addressed at the UNFCCC, essentially due to the better representativeness of the United Nations framework over the WTO. These countries have been involved in the establishment of a Forum on Response Measures, set up at 16th Conference of the Parties (COP 16) under the Cancun Agreement. Since 2010, the work of the forum has focussed on deepening the understanding of economic and social consequences of response measures. The forum has implemented a working programme and unilateral measures on climate change have been considered in the forum. It serves as the only existing mechanism for developing countries to tackle issues on the negative consequences of trade and climate change and the future of the forum is to be decided at the 19th Conference of the Parties (COP 19) in Warsaw, Poland later this year. South Africa's approach and position in terms of trade and climate change is to play an active role in the negotiations around response measures through its support for the continuation of the forum and on-going participation in the forum.

South Africa's exposure is multi-faceted

South Africa is exposed to the risks of climate change response measures in a number of ways. First, owing to the country's geographical distance from key trading partners, South Africa is the second most vulnerable country, after Chile, on a trade-weighted distance basis. Not only does it have a high ratio of trade to gross domestic product (GDP), between 50-60%, but its exports account for 45% of the country's GHG emissions, which is significantly higher than the world average.

Second, even though South Africa only accounts for 1.5% of global GHG emissions, the country is the 13th largest GHG emitter in the world (and the largest in Africa). As such, South Africa is more likely to be targeted by green protectionism than many other developing countries.

Third, it was acknowledged that the debate on trade and climate change for South Africa should not be limited to GHG emissions but should take into account the broader issues related to South Africa's energy mix and electricity production. South Africa remains one of the most energy-intensive economies in the world. While the high energy intensity of South Africa's exports has decreased in the last two decades, this is mostly attributed to technological innovations and only marginally due to a change in export composition. Comparing South Africa with larger producers such as China, on a scale basis, the country would appear less at risk to climate change measures. However, it is important to consider South Africa's vulnerability (which is not diminished by scale) not only in terms of production volumes but also production processes and the reliance on coal-based electricity. The high carbon intensity of the economy is underpinned by the country's reliance on coal for electricity generation as well as the role of mineral resources and energy-intensive industries in the country. Energy-intensive industries, historically supported by industrial policy, employ millions of South African workers and significantly contribute to the economy in terms of exports, output and foreign exchange earnings. Concerns were raised by these industries over electricity prices having more than trebled over the last decade. With demand growth and supply issues, there is a belief that this has had a structural influence on South Africa. An independent power producer representative called for a review of the single buyer model dominating South Africa's electricity supply market. The cost of producing electricity and the carbon content (CO₂ tonnes per megawatt hour of electricity produced) is a concern for the business sector. It holds implications for how competitive the electricity market could become in the future, and the place of clean energy.

Fourth, while South Africa continues to face the triple challenge of poverty, inequality and unemployment (which could be exacerbated by trade and climate change issues), South Africa's status of upper middle income country (by opposition to a least developed country) will most probably not exempt the country from being targeted by green protectionist measures.

Last, in terms of domestic economic and policy development, South Africa has not implemented an economy-wide carbon legislation as yet (although this may well change from 1 January 2015), thus increasing the country's vulnerability to border carbon adjustments (BCAs).² This holds significant implications for the potential impact of carbon pricing on the South African economy. While the introduction of a domestic carbon tax would allow for generated revenues to be recycled in the economy, hence reducing the impact on the country, foreign taxation of South African exports would have detrimental consequences for the country. The private sector has highlighted the need for clarity on the policy option the government will take as uncertainty holds the risk of a triple cost impact from the introduction of a carbon tax, a carbon budget approach and electricity price increases. Furthermore the need for policy alignment in the climate change domestic framework was raised, noting a misalignment between industrial, energy and carbon policies in particular.

South Africa's vulnerability to specific response measures and 'green protectionism'

Trade-related examples of climate change response measures (potentially) impacting South Africa include BCAs, subsidies, non-tariff barriers and regulations of bunker fuels. Trade and climate change issues are complex and only a few examples were discussed in the roundtable discussion. Companies particularly emphasised the importance for a sectoral approach to properly understand trade and climate change impacts on business in South Africa and risks involved on international markets. A one-size-fits-all approach is not appropriate. Some industries, such as iron and steel, highlighted that response measures would not have a significant impact on their sector due to the exemption of many large key players, especially in the European Union emissions trading scheme (ETS). However, several private sector stakeholders present at the roundtable discussion raised concerns over the implications of a domestic carbon tax. Studies by industry associations estimate an erosion of up to 94% of earnings before the deduction of interest, tax and amortisation expenses (EBITA) in some cases.

In order to better grasp the possible impact of response measures on the South African economy, three scenarios involving a 25% reduction in emissions from Annex 1 countries (i.e. developed countries) by 2020 (based on 1990 levels) were presented. They highlighted the vulnerability of the South African economy to measures implemented by developed countries to meet the 25% reduction target, particularly a shift in their trade pattern. The South African economy could be severely impacted, particularly coal, non-ferrous metals and other manufacturers. However, the impact could be largely offset if developing countries are in position to sell carbon credits for their domestic mitigation actions without being constrained to emissions reduction targets. In this case, the impact on the South African economy would be overly positive. Only coal mining would still face negative consequences, although to a much lesser extent. Further details on these scenario simulations can be found in a TIPS's study entitled *Trade and Climate Change: Policy and Economic Implications for South Africa*.³

A case study on the introduction of a BCA of USD 20 per tonne of CO₂ by the European Union and the United States of America also demonstrated the vulnerability of the South Africa economy. Non-ferrous metals (such as gold, platinum, copper, aluminium and cobalt) as well as iron and steel would be especially impacted facing the equivalent of a 10% *ad valorem* tax on their exports. Mining and quarrying (coal), paper, pulp and print, chemical and petrochemical and textiles would also be impacted to a lesser extent.

² BCAs are a type of Border Tax Adjustment (BTA) that may be seen as a way of imposing obligations on non-Annex 1 countries in terms of carbon pricing and are often done in conjunction with the design of a market based instrument like a carbon tax or a cap-and-trade scheme.

³ Du Plooy, P. & Jooste, M. 2010. *Trade and Climate Change: Policy and Economic Implications for South Africa*. Presented to the BASIC (Brazil, South Africa, India and China) Group meeting under the auspices of the UNFCCC in Tianjin, China in October 2010

In addition to BCAs, South Africa is also vulnerable to non-tariff barriers implemented on environmental grounds (such as phyto-sanitary measures, labelling schemes, standards, etc.). For example, these are of particular relevance to agricultural products and the wine industry (which has seen growing pressure to export to the European Union in bulk as opposed to branded glass packaging). In the manganese industry, the issue of compliance with international standards, namely ISO 14 000, was raised as a concern. The effort to comply with standards in terms of the implementation of an environmental management programme does not practically provide any real benefit to companies.

While green protectionism has been part of the trade and climate change debate since the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), it was remarked that green protectionism had not featured as an issue at the recent World Energy Conference. Likewise, the business sector did not interpret green protectionism as a significant threat. In response, the need to understand the cumulative impact of climate change measures and the qualitative shifts and pressures on a country like South Africa was stressed. Creeping protectionist measures that are not as obvious as tariff barriers, such as private labelling schemes and the greening of value chains, can ultimately have a significant impact. The call for in-depth threat analyses at sectoral level related to trade and climate change was echoed throughout the discussion and it was emphasised that preparation is key to dealing with the associated risks. Instead of focussing on the threats around green protectionism, the focus should be on being prepared to deal with potential threats, which should essentially be factored as issues of risk. The importance of keeping track of how South Africa's trading partners respond to climate change issues, and how this could impact the economy, was particularly highlighted.

The South African perspective on energy efficiency

Various factors have been driving energy efficiency globally. Some of these drivers include eliminating wasteful usage, lowering energy and operational costs, reducing exposure to electricity price volatility and oil price fluctuation impacts, increased profitability and reputational benefits and market acceptance. McKinsey Global Institute estimates that an annual investment of USD 170 billion in energy efficiency worldwide could generate an average internal rate of return (IRR) of 17%, and energy savings of up to USD 900 billion annually. Furthermore, energy savings can be considered as the least costly measure to addressing energy shortage. They can be applied in building, industrial, transport and energy supply activities, as well as in agriculture and other areas of economic activity; both in the supply and demand side of the energy value chain. In South Africa's case, there are also an estimated 68 000 jobs to be created in the energy and resource efficiency sectors in the long term.

However, while cost considerations have been driving energy efficiency improvements, concerns were raised around the need to address a persistent market failure in this area. At the global level, again from the World Energy Conference, there was consensus that a key stumbling block to energy efficiency has been a lack of sophisticated civil service (such as standards boards).

In addition, business representatives attending the discussion raised that energy efficiency opportunities are limited and will come to an end. Companies set energy saving targets as part of their energy policies and setting the right and most realistic targets for companies' energy efficiency becomes a practical concern in actually achieving these energy savings. Studies done by the International Energy Agency as well as the Energy Research Centre have estimated potential energy savings by companies of around 27%, however it was opposed that a 10% reduction in energy is more realistic. For example, a business stakeholder highlighted that saving even one tenth of a percent in the aluminium smelting business is a major achievement.

The involvement of the right people in the companies, such as energy efficiency managers, and developing the appropriate management tools, especially in planning and monitoring energy use, was recommended to further savings. Coordination and support amongst business in terms of best practice learning was also emphasised. The National Business Initiative (NBI), for example, has launched a platform to share learnings and gain support in term of both information and guidance. The initiative will also assist companies in terms of energy efficiency assessment.

Companies not only face the challenge of setting realistic targets for energy efficiency gains but also need to consider the cost implications their savings plans. In some cases, a large overhaul of a plant could be a very costly exercise but generated energy savings would justify the investment. Such an example was given by the latest improvements at a manganese operation. At the M14 metal alloys project in the Northern Cape, a major overhaul of the Meyerton smelter was done that involved not only changing the product input mix but also replacing old furnaces. The change notably improved performance and introduce cogeneration into the energy use of the company. reducing its use of electricity. While the improvement cost around USD 1 billion. there was a clear business case for the project which brought increased profits and improved environmental performance.

Driven by the principle that energy efficiency leads to enhanced profitability, a United Nations Industrial Development Organisation (UNIDO) study on the rates of return of 199 global energy efficiency projects demonstrates that, in some cases, the IRR exceeded 40% for projects with a five-year time horizon. Interestingly, smaller investments (such as process reorganisation) are often the most profitable. Larger investment projects (including the replacement of machinery and equipment in process industries) remains nevertheless substantially profitable.

In conclusion, the threats of climate change to South Africa's private sector should be analysed in depth, and its implications adequately understood by companies. Being prepared to face the challenge of climate change will also provide the sector with opportunities to become more competitive and improve profitability. The private sector is encouraged to keep seeking energy efficiency gains in their companies and to implement these along best practice guidelines. The response to climate change cannot be business-as-usual.