

Seventh CEPR/EAERE Webinar on Climate Policy: Economics of Carbon Border Adjustments

21 March 2022 - 17:00 - 19:00 CET (Frankfurt/Paris/Amsterdam) - Hybrid

The “Fit-for-55” package, an ambitious plan to make the European Union (EU) climate neutral by 2050, was proposed by the EU Commission on 14 July 2021. One of the key elements of this policy package is the Carbon Border Adjustment Mechanism (CBAM). Aiming to address the risk of carbon leakage, this mechanism will consist of a tax on the carbon footprint of imports and cover sectors representing the bulk of the leakage risk, such as steel, cement, or electricity. In March 2022, while the Economic and Financial Affairs Council (ECOFIN) reached an agreement (general approach) on this regulation, it fell short in some key issues.

For this Seventh CEPR/EAERE Webinar on Climate Policy, [Stefan Ambec](#) (Toulouse School of Economics) presented *“Some Economics of Carbon Border Adjustments”* followed by a roundtable discussion on the EU CBAM proposal with [Jean Pisani-Ferry](#) (Bruegel, PIIE and CEPR), [Agnès Benassy-Quéré](#) (Paris School of Economics, French Treasury and CEPR), [Andrei Marcu](#) (ERCST) and [Luis Garicano](#) (EU Parliament and CEPR). The roundtable and Q&A session with the audience was moderated by the Climate Change RPN Leader, [Christian Gollier](#) (Toulouse School of Economics and CEPR).

Panellists:



Stefan Ambec
Toulouse School
of Economics



**Jean Pisani-
Ferry**
Bruegel, PIIE and
CEPR



**Agnès Benassy-
Quéré**
Paris School of
Economics, French
Treasury and CEPR



Andrei Marcu
ERCST



Luis Garicano
EU Parliament and
CEPR



Moderator:

Christian Gollier
Toulouse School
of Economics and
CEPR

Key Points of the Webinar

- **The carbon leakage issue**

Climate change is a global issue requiring international coordinated policy responses. However, one of the most climate-effective policies, known as “carbon price”, is until now only implemented locally by unilateral schemes at the regional, national, and supra-national levels, e.g., the EU’s Emission Trading Scheme (EU ETS), the world largest carbon-pricing system. Carbon pricing consists in placing a value on each tonne of carbon dioxide emitted by companies to incentivize emission reduction. Due to a lack of global coordination combined with international trade, unilateral efforts in carbon prices are doomed to generate a carbon leakage dynamic scaling down greenhouse gas emissions reduction. Carbon leakages can take place from the moving of local production to regions with laxer climate policies or the substitution by imports from these regions. For instance, the reduction of carbon emissions of the EU by 21% between 1990 and 2018, has been counterbalanced by an increase in net imports of carbon from third countries of 28% in the same period¹.

- **The phasing out of free allowances and introduction of CBAM**

The current policy addressing carbon leakage and safeguarding EU industry competitiveness is the free allowances mechanisms under the EU ETS. Free allocations are assigned to carbon-intensive companies or those exposed to international competition. This mechanism harmonises the playing field nationally and internationally and reduces both imports and exports. However, free allowances imperfectly protect EU industries from untaxed imports, while creating a behaviour of hoarding that blurs the price signal. Over time, in accordance with the revised ETS, the number of free allowances accorded to European industries will decline and be phased out between 2026 and 2035, while more stringent benchmarks will be applied.

To respond to the increase in carbon leakage this decrease will induce, the CBAM will be introduced from 2026, after a transition period from 2023 with reporting and monitoring obligations. It will gradually replace the existing free allocation of allowances mechanism. Designed to function in parallel to the EU ETS, by mirroring its functioning on imported goods, the CBAM takes the form of a tax on the carbon footprints of imports. It will cover the production of the following pilot sectors: cement, aluminium, fertilisers, electric energy production, iron, and steel, which are exposed to a significant risk of carbon

¹*Our world in Data, Peters et al. (2012) and the Global Carbon Project (2018), Luis Garicano Analysis*

leakage and represent 45% of the emissions covered by the ETS. The CBAM will initially focus on direct emissions from industrial processes to produce goods. Importers shall quantify the default values of imports and must purchase certificates corresponding to the generated emissions.

The CBAM pricing is based on goods imported into the customs territory of the Union, rather than on manufacturing plants, as for free allowances. This mechanism ensures that the price of imports reflects their carbon content, thus reducing the risk of carbon leakage and supporting the EU's unilateral decarbonisation effort. The CBAM ensures fairness by ensuring equivalent carbon pricing between imports and domestic products. It furthermore creates incentives for third countries to start pricing carbon and invest in decarbonisation efforts at the production level.

- **CBAM remaining issues**

- **Carbon Leakage on Exports**

CBAM reduces high carbon intensity imports into the EU. However, compared to free allowances, it only levels the playing field in the domestic market but does not supply a level playing field for the export of less carbon-intensive products leaving the EU. It should thus be completed by compensation or exemption - through an export rebate - to address the risk of carbon leakage in the export-oriented sector while keeping strong decarbonisation incentives. There was a consensus of the panellists that the social acceptability of the ambitious EU climate targets should not weaken the export potentials of the Union, and that a fair competition should be guaranteed for its exporters too. There should be a full symmetric treatment of exports and imports towards carbon pricing in the CBAM.

- **CBAM scope**

The current proposal only includes direct emissions, leaving aside emissions from the production of electricity used in industrial processes. This may create perverse incentives, such as companies reducing their carbon footprint by switching from in-house energy production to grid power. In terms of horizontal coverage, a risk also lies in the use of "substitute" products of the 5 sectors initially covered by the CBAM (e.g., cement substituted by glass or lime). Finally, regarding vertical coverage, only raw materials are considered by the mechanism, not including downstream products such as car chassis. This may lead to a carbon leakage downstream the supply chain if car manufacturers access cheaper steel, electricity, or aluminium by moving their production plant abroad. These issues in coverage entail significant risks for the EU domestic market and may weaken the objective to reduce carbon leakage.

Including in the CBAM both direct and indirect emissions from the beginning, while committing through

a binding calendar to the horizontal and vertical extension, could act as a compromise solution providing certainty on climate goals.

- **Measuring Carbon Footprint**

Another remaining issue is the measurement of carbon footprint of outputs produced outside the EU. Data on emissions from foreign plants may not always be available or reliable. If an importer is not able to quantify the carbon footprints of products, one solution is for the EU to apply the average footprint of the country of origin, or to use the footprint of EU products as a benchmark based on the 10% less carbon-intensive products. *"Benchmarking carbon footprint of foreign products avoids "resource shuffling": foreign companies cannot allocate all decarbonated inputs (e.g., renewable sources of energy) to exports to reduce the carbon footprint of their product without investing into pollution abatement"*². On the other hand, another solution of the CBAM, is to offer third countries to certify carbon footprints of products when it is lower than the benchmark.

- **Climate Club**

Finally, an important pending question is the cooperation with third countries. Importers should only pay the difference between the domestic cost and the charge to the manufacturer's carbon price. *"Comparing carbon prices are on occasions implicit and may raise issues (...) or expressed in different units"*³. The pricing adjustment to existing carbon price incentivise the establishment of - in parallel to the CBAM - a climate club where carbon pricing and ambitious climate policies can be discussed and encouraged. In such a club, following the idea of the Nobel Prize-winning economist William Nordhaus, a common explicit carbon price can be put in place among members. Furthermore, penalties shall be included at the border for non-members to prevent carbon leakage and act as an incentive to join the club.

² [Ambec Stefan, Impact and challenges of carbon border adjustments, 6 July 2022](#)(as of 27/07/2022).

³ *Ibid.*