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Carbon border adjustment in the EU – the implications for Japanese exports

Both Japan and the European Union are working to become climate neutral by 2050. This means that in the next 30 years, drastic changes need to take place for both regions to reach net zero greenhouse gas emissions, where any remaining emissions are offset by an equal removal of greenhouse gases from the atmosphere. The EU aims to reduce emissions by 55% by 2030 compared to 1990 emissions levels and has introduced the European Green Deal to achieve these goals. Japan and the EU recognize their joint commitment to battling climate change in the EU – Japan Strategic Partnership Agreement (SPA) which includes a separate article dedicated to climate change and efforts to reduce greenhouse gas emissions. In this article, there is even a mention of Japan – EU coordination on market-based mechanisms to achieve such a reduction of emissions. This article has the potential to become highly relevant given some recent developments in climate policy on the European side.

Currently, one of the main mechanisms to reduce carbon emissions in the EU is the Emissions Trading System (ETS). The ETS establishes a carbon market which creates financial incentives for businesses to reduce their carbon emissions. However, the ETS could also be an incentive for companies to relocate part of their business abroad to where there's no price on carbon and hence production might be cheaper. To avoid this so-called "carbon-leakage" within the revised design of the EU ETS, the EU will introduce a Carbon Border Adjustment Mechanism (CBAM).

Under CBAM, imports will pay the same price on carbon emissions as domestic EU production. The European importers will have to buy carbon certificates for the imported goods that are equivalent to the carbon price that would have been paid if the product had been produced within the EU. The expectation is that this will discourage carbon leakage. Also, if the imported product was already subject to a carbon price during production at home, this cost can be deducted from the amount paid by the European importer. For Japan, all of this begs the question of what kind of impact CBAM will have on Japanese exports to the EU.

In the first stage of the implementation of CBAM, the mechanism will only apply to a few emission-intensive sectors which are at an increased risk of carbon leakage. These sectors are iron, steel, cement, fertiliser, aluminium and electricity generation. Additionally, there will be a transition period between 2023-25 where importers do not yet have to pay a carbon price. Instead they will only need to report the emissions of the imported goods. From a Japanese perspective, it is important to know how significant these target sectors are within exports to the EU and whether there are any domestic Japanese carbon policies that could reduce the price on carbon paid under CBAM.

While not one of the main Japanese export sectors to the EU, Japan produced a fair amount of iron and steel products for the European market in the period between 2017-2020. In 2017 and 2020, the yearly value of such iron and steel exports was more than 350 million EUR. In 2018 and 2019, values even exceeded 400 million EUR. The value of aluminium exports from Japan to the EU is lower compared to iron and steel. Still, it seems aluminium exports have been

growing under the EU – Japan Economic Partnership Agreement (EPA) which was implemented in 2019. These aluminium exports were worth 67 million EUR in 2018 and grew to over 112 million in 2020. Yearly exports of fertilizers and cement were less significant, worth around 2,5 million EUR and 5,5 million EUR respectively between 2017-2020.

Since 2019, the iron, steel and aluminium sectors have adapted and started using the lower tariffs provided under the EU – Japan EPA. In 2019, around 23% of these exports to the EU used the lower tariffs of the agreement. In 2020, this was more than 90% for iron and steel exports and around 45% for aluminium exports. Given these sectors' eagerness to make use of the lower tariffs, it might be a daunting prospect that they will be subject to a new kind of tariff starting 2026. Moreover, under the EPA some European import tariffs on aluminium products will only be phased out fully starting in 2024. This leaves a short window of opportunity for this sector to make use of tariff-free treatment before a carbon tariff will be applied. If, after the first stage of CBAM, the EU judges that the mechanism works as intended, there is a possibility that the sectoral scope will be extended and that other Japanese imports will start paying a carbon tariff. There is currently no certainty about which sectors will be included, but it is likely that products further down the value chain will be integrated as well.

Yet, if producers already pay a price for carbon emissions in Japan, it is possible that this cost will be deducted from the carbon price levied at the European border. So, what kind of carbon pricing mechanisms are there currently in Japan? Unlike in the EU, there is no nationwide emissions trading system in place in Japan. Still, producers and consumers pay for emissions via taxes on energy and transportation. Notably, in 2012, Japan introduced the Global Warming Countermeasure Tax which sets a carbon price of 289 JPY per ton CO_2. There are also other pricing channels which resemble more closely the EU's ETS, such as the J-Credit Scheme and Joint Crediting Mechanism (JCM).

The J-Credit Scheme rewards credits to businesses and projects that take measures to reduce or offset carbon emissions, the latter can be achieved for example through the development of forest sinks. These credits can be bought, traded and used for initiatives such as Keidanren's commitment to a low carbon society. The JCM is an international cooperation mechanism via which Japan supports partner countries, often developing nations, to reduce and remove greenhouse gas emissions. Japan cooperates with these partner countries by sharing and implementing technology that can be used for carbon reduction. These endeavours are rewarded credits that are registered as part of Japan's efforts to achieve its emission reduction targets.

In 2021, the average tax on carbon in Japan was equivalent to 2.29 EUR per tonne of CO_2 emissions. The average fuel excise tax was equivalent to 29.3 EUR. Furthermore, compared to other OECD countries, Japan scores well in the lower half when it comes to accurately pricing the real cost of carbon, assuming carbon costs are around 60 EUR per tonne of CO_2. In summary, there are some national policies in place in Japan under which Japanese exports of iron, steel and aluminium might qualify for CBAM price reductions. Nonetheless, the EU still

has a higher average price on carbon, meaning there will certainly still be a cost to pay at the border.

Currently, there are also two regional emissions trading systems in place in Japan, one in Tokyo and one in Saitama. Both systems have been in place for over a decade and have proven to be efficient at reducing greenhouse gas emissions and air pollution, even though the Saitama ETS operates only on a voluntary basis and there is no penalty for non-compliance. These ETS are highly ambitious in the scope of application as they target both factories as well as buildings. These local initiatives might also be taken into account under CBAM. Another local initiative was taken by the Tokyo Stock Exchange (TSE). In the future, TSE will require companies listed on their prime market to ramp up their environment-related disclosure based on recommendations by the Task Force on Climate-Related Financial Disclosures.

So, are there any plans in Japan to install a national emissions trading system in the future? Plans for a nationwide ETS were briefly on the table in 2009 when the Democratic Party of Japan was at the helm. Yet, these plans were shelved as a result of pressure from business associations who feared that such a system might make Japanese manufacturers less competitive compared to foreign producers not covered by an ETS. A mechanism such as CBAM could alleviate these kinds of competitiveness concerns. Recently, plans for an ETS have resurfaced and Japan's Ministry of Economy, Trade when Industry (METI) announced tentative plans to introduce a pilot programme for a carbon credit market as early as April 2022.

Any future nationwide ETS in Japan could further reduce the costs of carbon under the EU CBAM. Also, if Japan were to introduce a national ETS, this could strengthen Japan – EU cooperation on environmental issues. Maybe this is what the Japanese and European negotiators envisaged when they included a provision in the SPA that explicitly mentions coordination on market-based mechanisms to reduce emissions. Such cooperation would be in line with Japan and the EU's joint commitment to fighting climate change and it would give a strong signal to the rest of the world that both regions are fully dedicated to reach their environmental goals by 2050, no matter how challenging this might be.

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