

## A Japanese Perspective on CBAM and Carbon Pricing

@Bruegel

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##### RIETI, Waseda University, RIEEM, Paris School of Economics May 22nd, 2024

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# Summary of EU CBAM

* EU Commission announced the implementation of a CBAM in July 2021



**Iron and Steel**

**Aluminium**

**Chemicals**

**Cement**

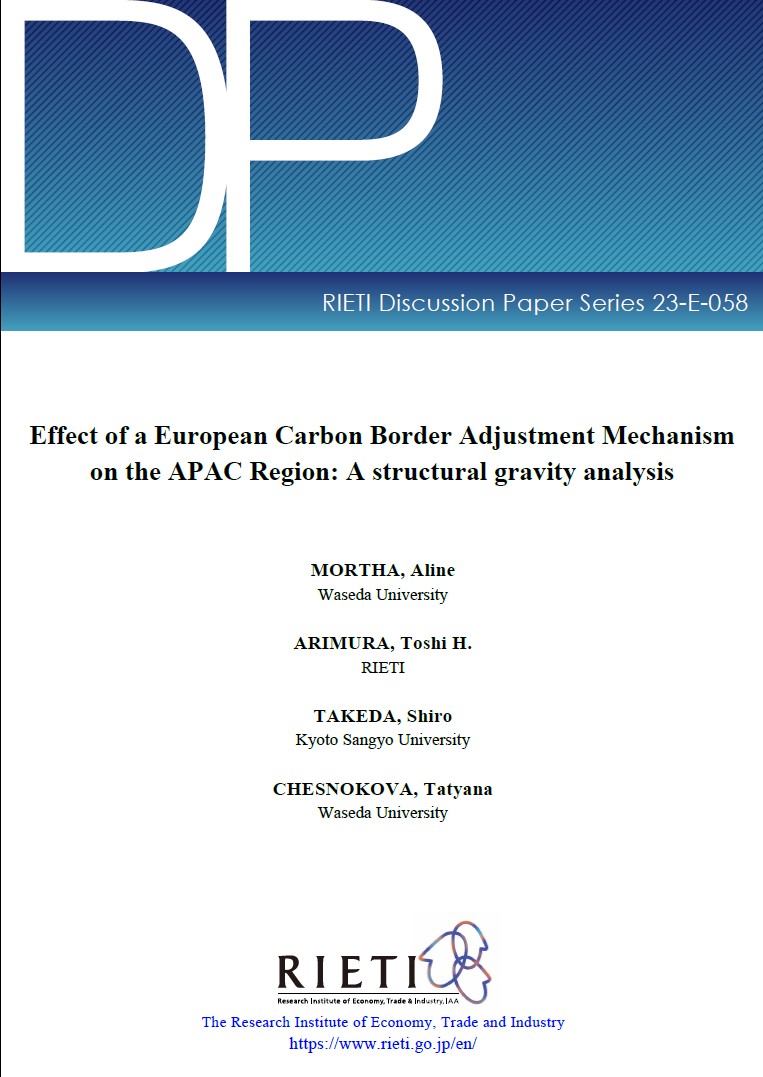
**Electricity**

* The proposal was revised by the EU Parliament, and accepted in June 2022
* Exporters to EU will have to pay a carbon price at the border (**importers purchase certificates**), the value of which will be determined based on the **embodied emissions of their product** as well as the level of carbon pricing paid in the country of origin.
* A **pilot period started** from October 2023 and exporters will have to start paying from 2027 (discounted payment until 2032 when free allowances end in the EU ETS)
* A controversial policy, the EU CBAM has been criticized as a form of climate protectionism by BRICS members and it is unclear whether the EU proposal abides by **the rules of the WTO.**

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# Two Impacts of EU CBAM

## Direct Economic Impacts



Economic Analysis of CBAM by Structural Gravity Model

– Impacts on Japan and Asia using a structural gravity model.

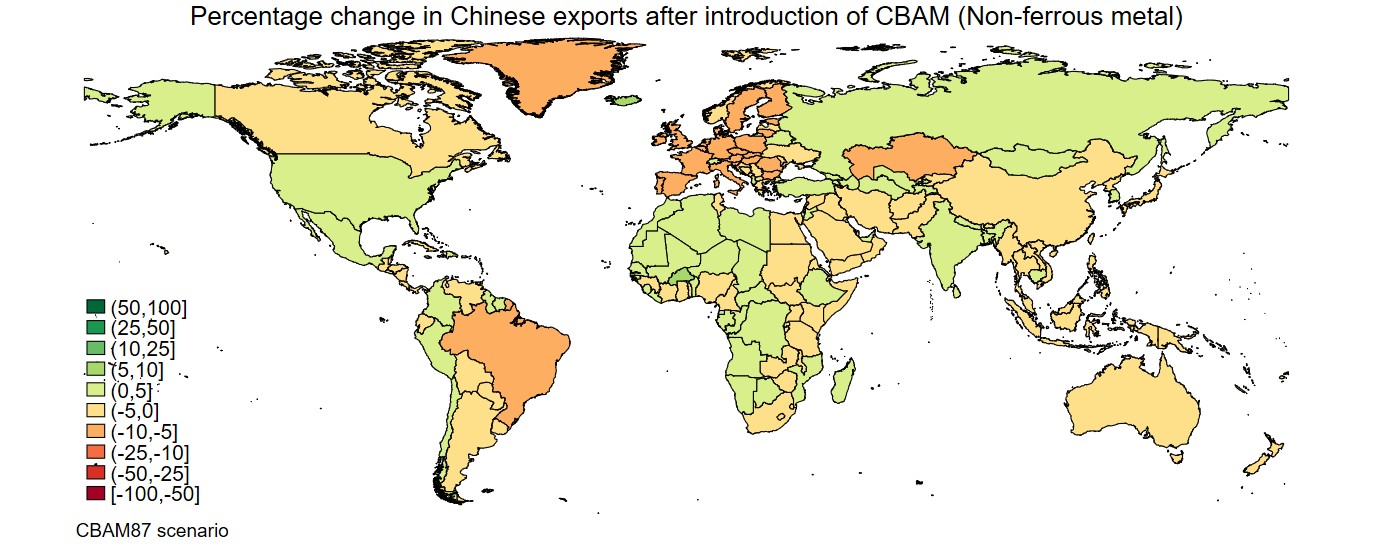
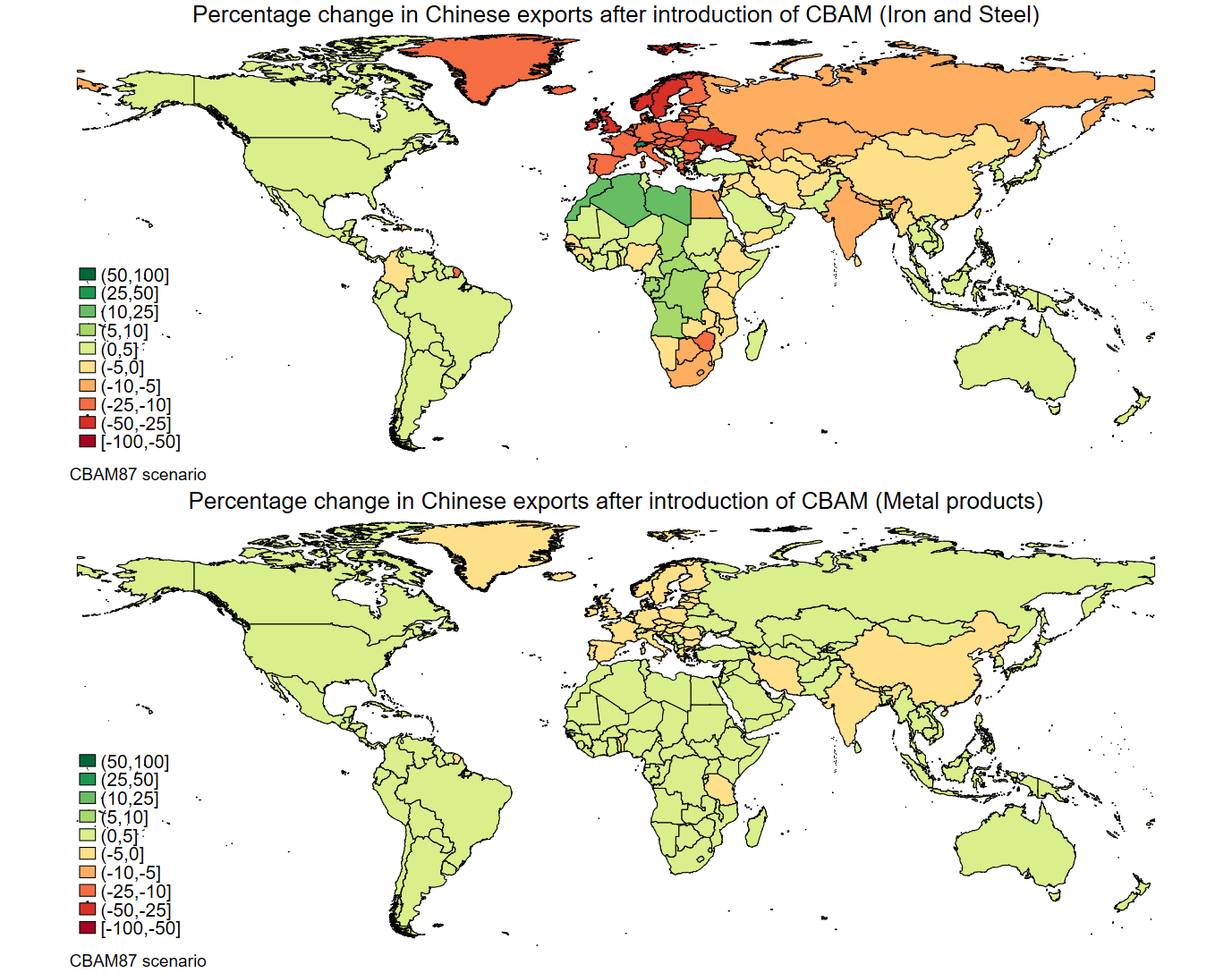
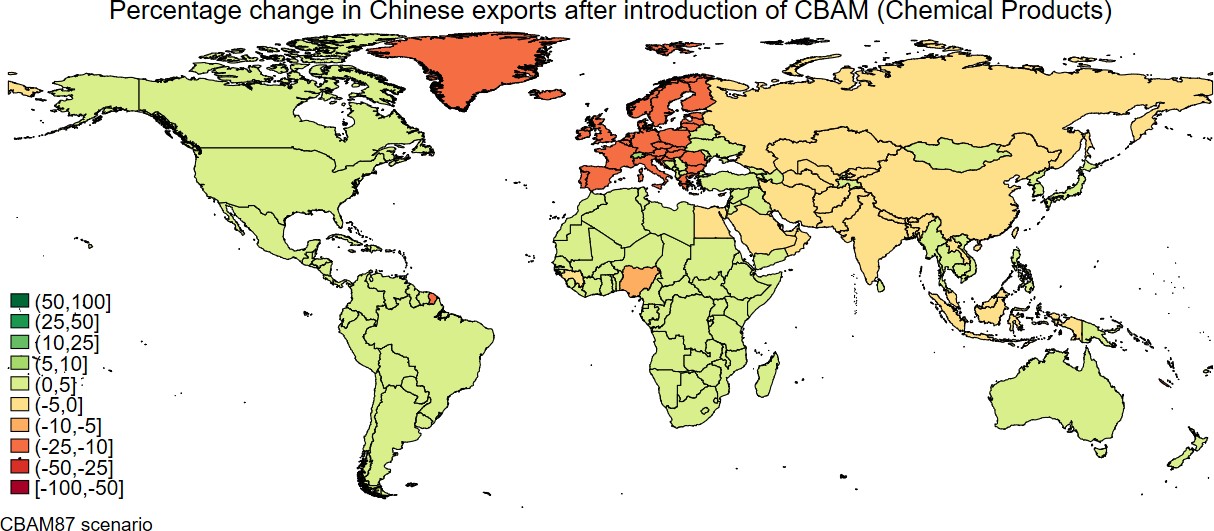
## Indirect Impacts: Carbon Pricing around the world after CBAM

**https://**[**www.rieti.go.jp/en/publicati**](http://www.rieti.go.jp/en/publicati) **ons/summary/23080002.html**

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# Changes in exports from China

(CBAM 87€)



Negative Impacts on Developing

Economies in general

Chemical Products

Steel

Export to EU will be reduced.

Metal Products

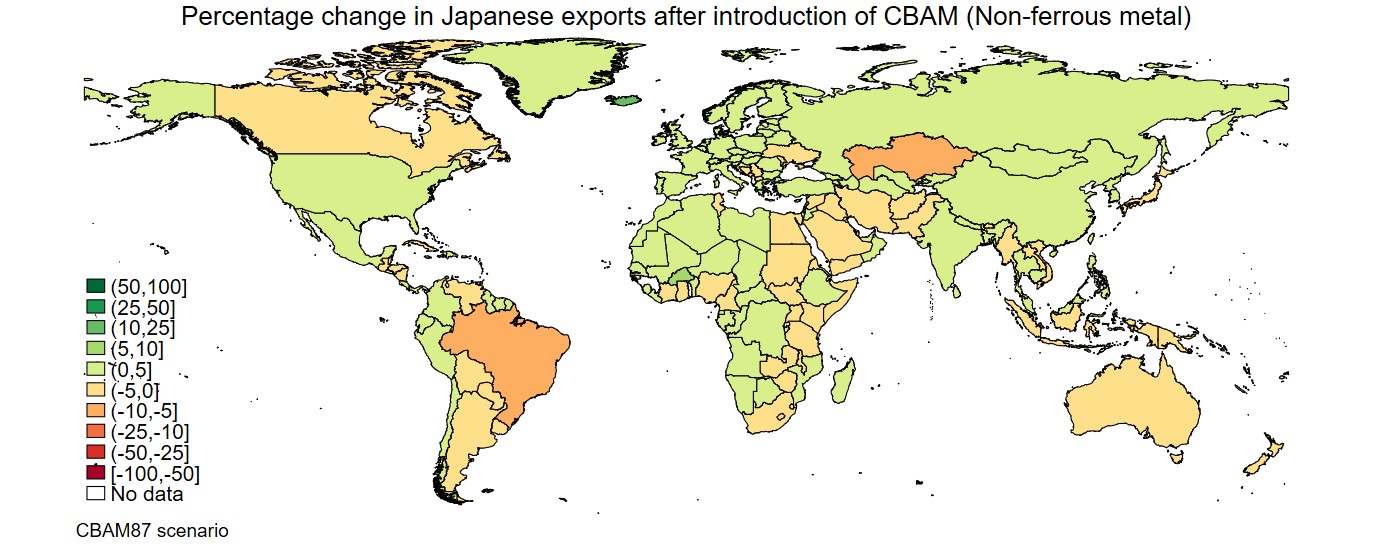
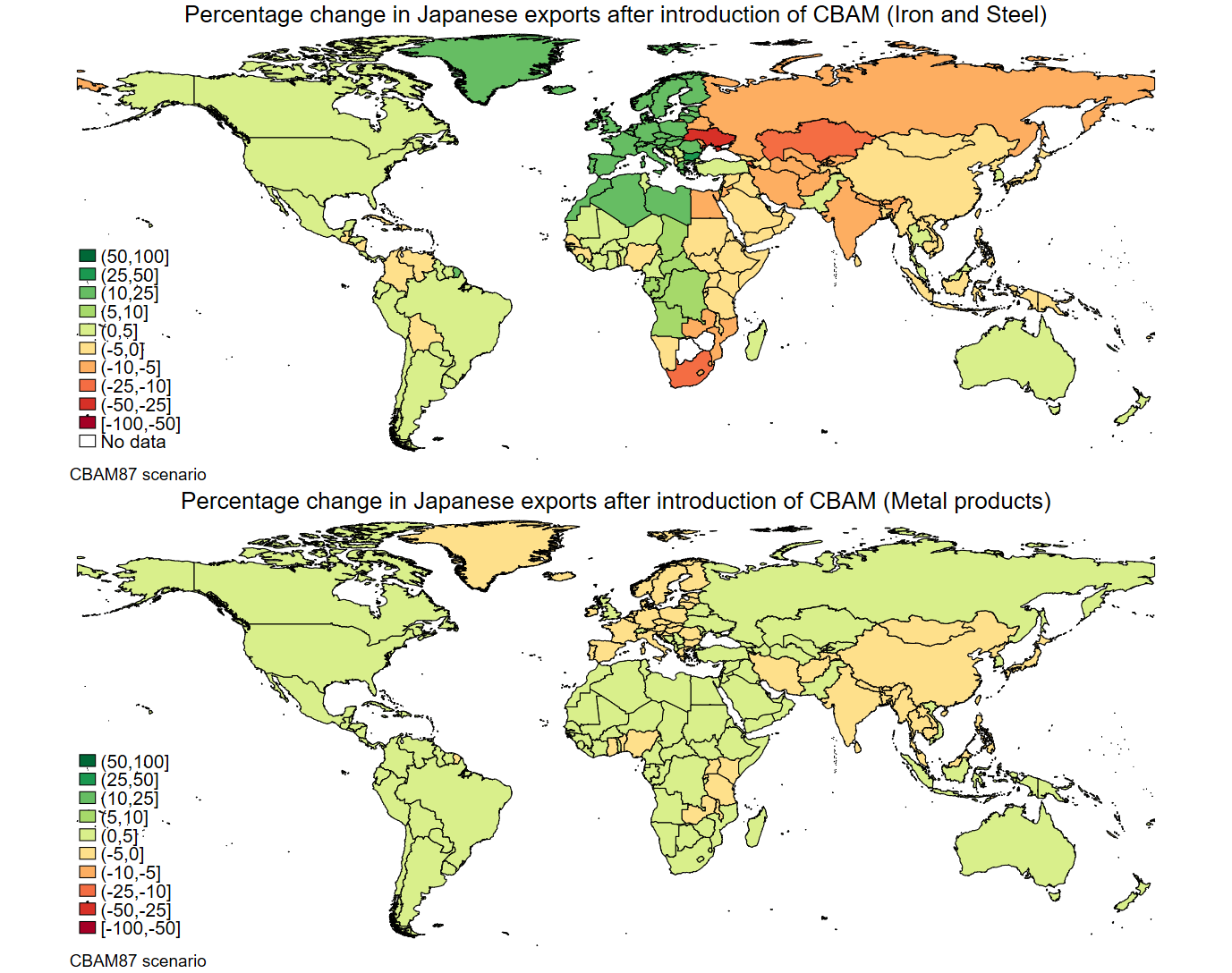
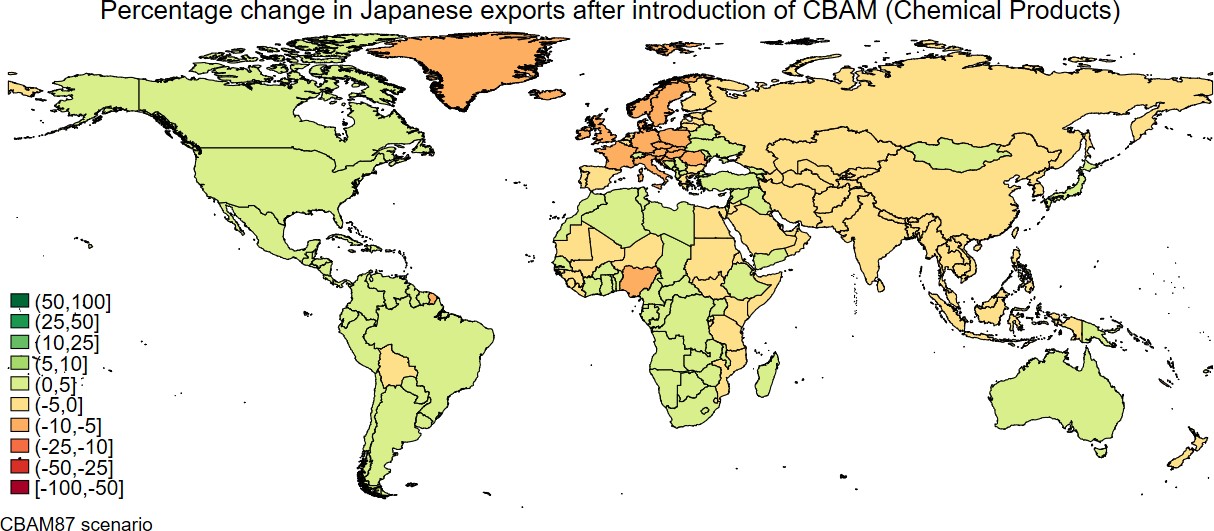
Non-ferrous Metal

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# Changes in exports from Japan

(CBAM 87 €)



Chemical Products

Positive Impacts on Some

Developed Economies

Steel

Japan my gain in EU Trade from CBAM

Metal Products

Non-ferrous Metal

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Carbon Pricing around the world

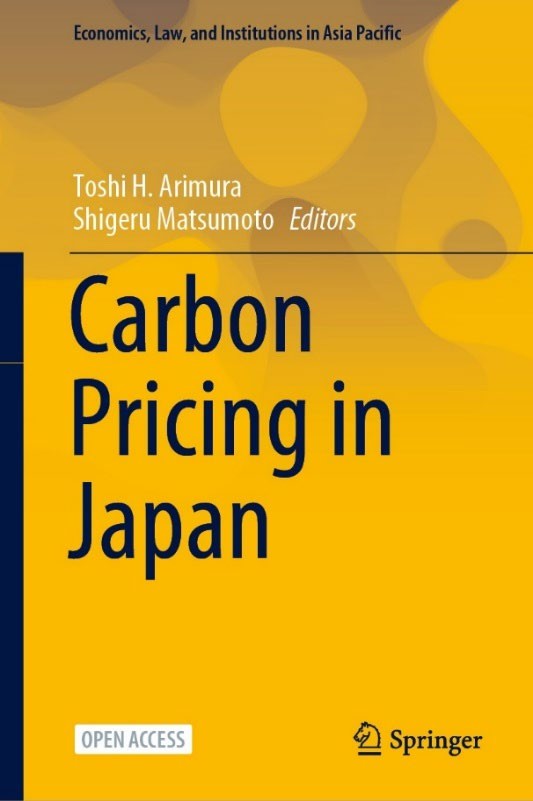
*Before and after CBAM*

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Japanese Carbon Pricing before CBAM (1)

* Regional Emissions Trading Schemes in Tokyo (2010-) and Saitama (2011-)

ETS



ETS

Saitama

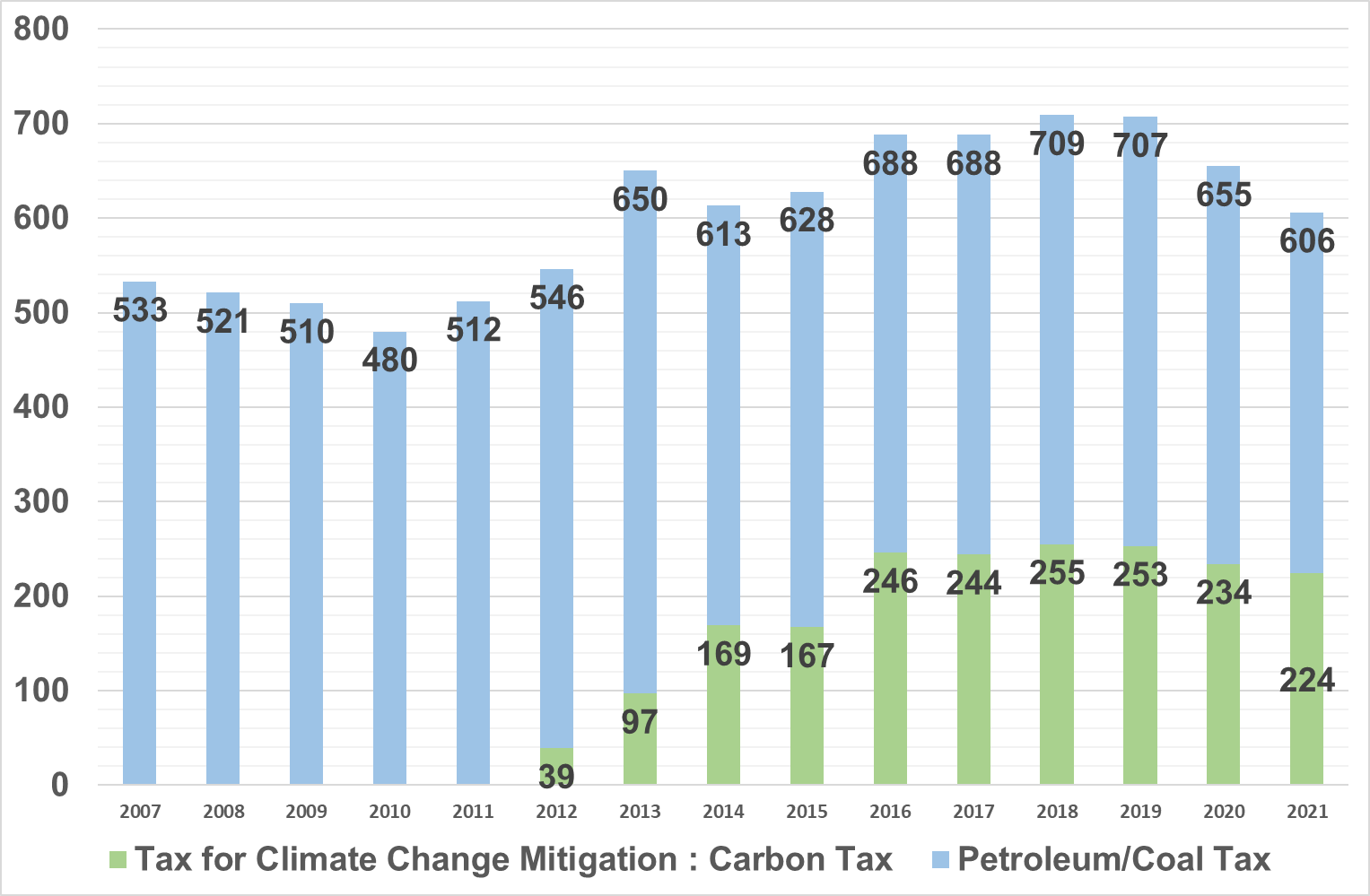
Tokyo

[Arimura & Matsumoto Ed.](https://link.springer.com/book/10.1007/978-981-15-6964-7)

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Japanese Carbon Pricing before CBAM (2)

### Carbon Tax at the national level (2012-)



Carbon Tax Revenue

Carbon Tax Revenue (Billion Yen)

* 289 yen per CO2 ton (<<2 €)

### The revenue is used for energy- related innovation

Source: Japanese Ministry of the Environment

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*Reaction to CBAM?*

Green Transformation (GX) Act in Japan

1. Japan Climate **Transition** Bond (2023-)

#### Funding for R&D and Innovation（2 trillion yen in 10 years)

1. **Carbon Pricing**

#### An Emissions Trading Scheme (GX-ETS)

* 1. Phase I: 2023-2025 (Though voluntary, required for access to the GX bond. Covers more than 50 % emission)
  2. Phase II: 2024- (Mandatory) (Planned)
  3. Auction after 2033 in the power sector (Planned)

#### Carbon Surcharge （carbon tax）

* Charges on the imported fossil fuels (similar to current oil and petroleum tax) after 2028 9

Overview of carbon pricing implementation in the world

Carbon tax implemented or planned

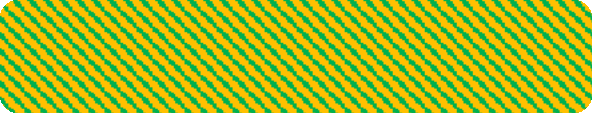
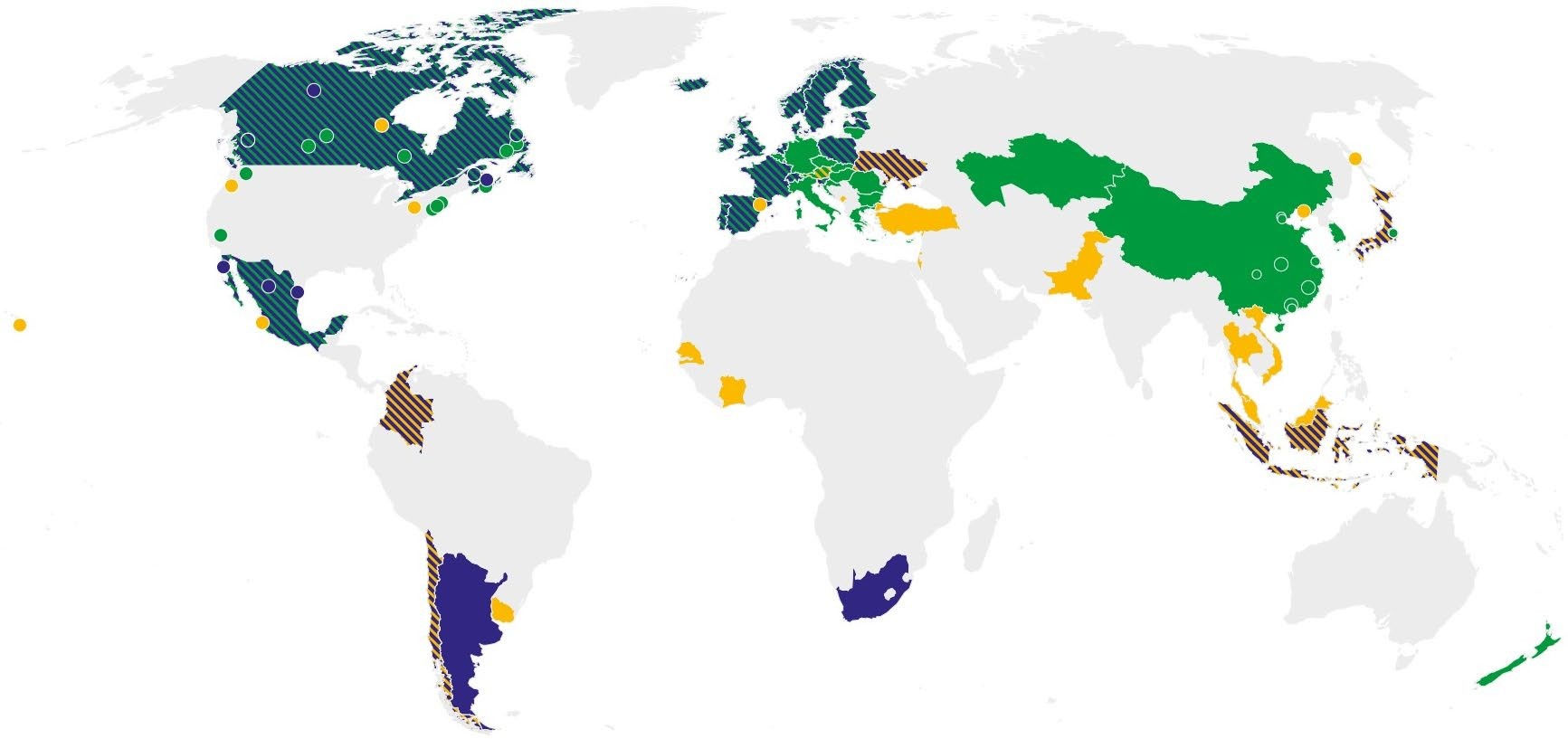
ETS or carbon tax considered

ETS implemented or planned



ETS and carbon tax implemented

EU ETS



ETS implemented or planned; carbon tax considered



Carbon tax implemented or planned; ETS considered

Korean ETS

**ETS only in Tokyo and Saitama**

California ETS

Carbon tax

RGGI

(Power)

ETSs in Turkey

Chinese ETS (Power)

GX in Japan

CPs in ASEAN

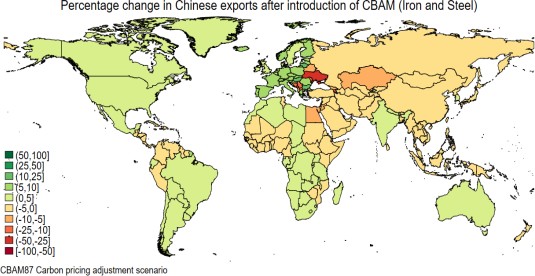
Carbon tax (Chile)

Carbo炭n 素tax税(Singapore, South Africa)

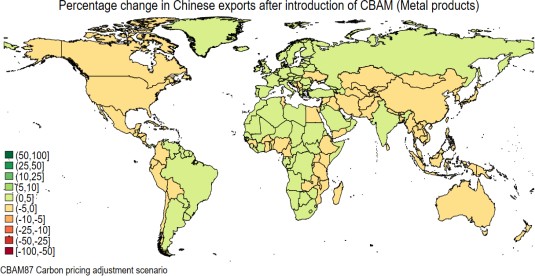
From: The World Bank, Carbon Pricing Dashboard, https://carbonpricingdashboard.worldbank.org/map\_data 10

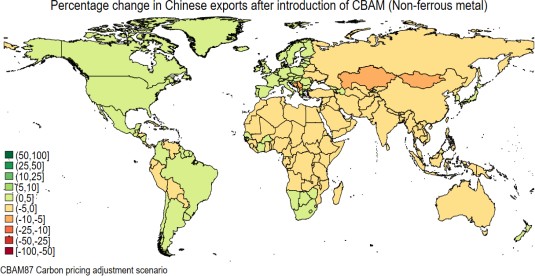
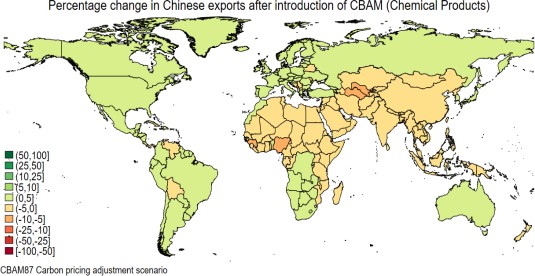
Changes in exports: China

(CBAM87 € with CP adjustment in G20)



China may recover export to EU





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# Overall Impacts of EU CBAM

##### Vulnerability to the policy depends on the level of development

* + High-income economies increase their exports to the EU (comparative advantage).
    - **Wider the North/South gap?**

##### Middle-income economies reduce their exports to the EU (and redirect to Africa)

* + CBAM might effectively tackle carbon leakage concerns in EU

##### EU CBAM is likely to contribute to emission reduction through the promotion of carbon pricing in other parts of the world

* + Japanese GX Policy

##### Turkey, ASEAN countries…

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# Thanks!

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