

2019 United Nations Framework
Convention on Climate Change



UNFCCC – Joint Side Event

Carbon Pricing: Concepts, Regional Developments, and Future Governance

December 13th, 2019



Carbon Pricing: Concepts, Regional Developments, and Future Governance

Speakers & Topics

- Prof. Michael Rodi, University of Greifswald, Institute for Climate Protection, Energy and Mobility (IKEM)
Emissions Trading and Energy Taxes – A European Misunderstanding
- Prof. Maria Rolim, Dundee University and Brazilian Institute of Energy Law (IBDE)
Carbon Pricing in Latin America
- Prof. Michael Mehling, Strathclyde University & Massachusetts Institute of Technology (MIT)
Pricing Carbon at the European Border
- Ms. Wan-Ting Yen, Taiwan Research Institute (TRI)
Introduction of Carbon Pricing Mechanisms in Several Asian Economies
- Dr. Farid Karimi, Interdisciplinary Center for Baltic Sea Region Research (IFZO)
Carbon pricing conundrum: socio-political aspects

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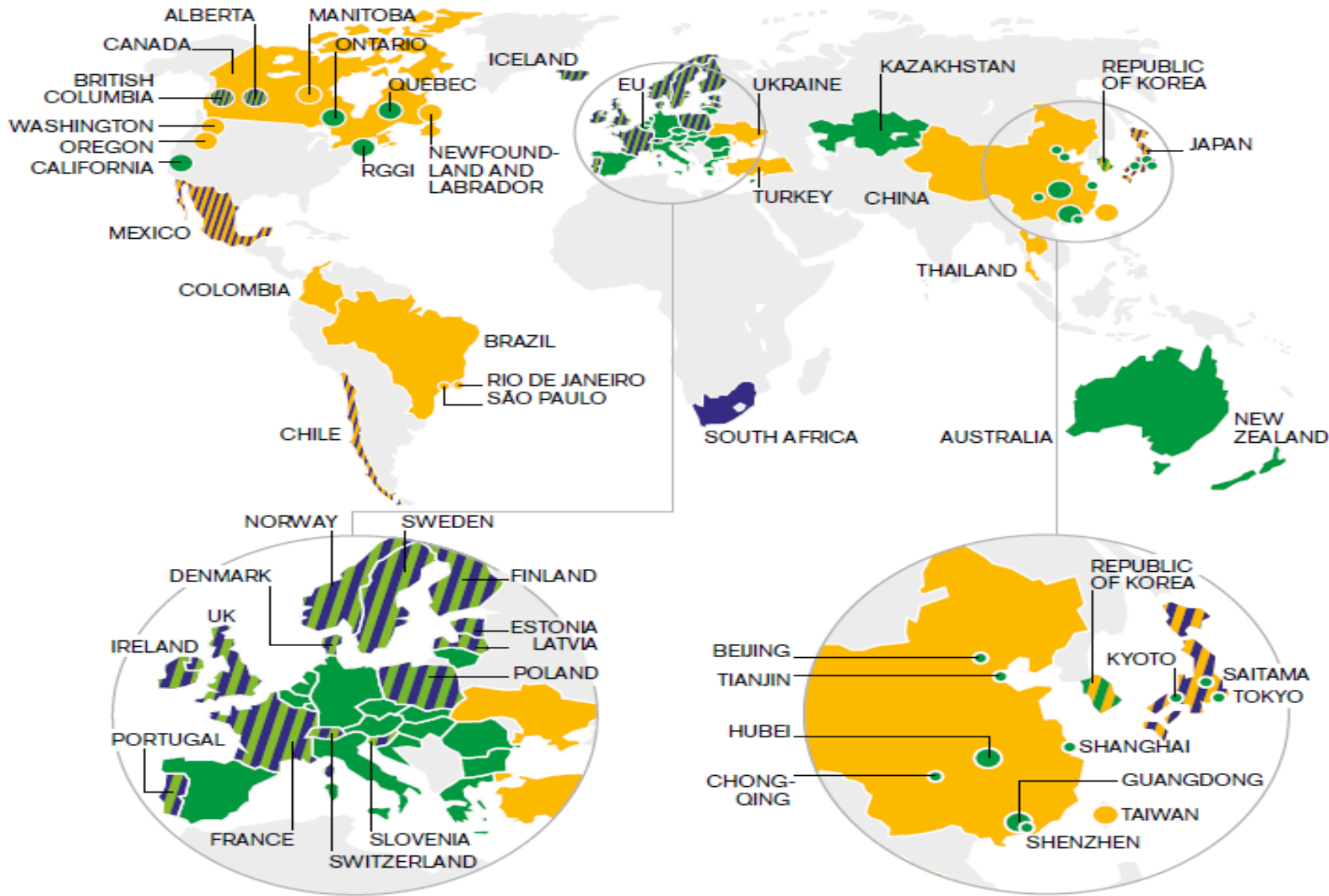
Emissions Trading and Energy Taxes – A European Misunderstanding

Prof. Dr. Michael Rodi

Madrid COP25 – December 13th 2019

Emissions Trading and Carbon Taxes

- Carbon taxes may be direct carbon taxes (taxing carbon emissions) or indirect carbon taxes (taxing fossil energy products); existing energy taxes thus often are indirect carbon taxes
 - Indirect carbon taxes (or energy taxes) may even have carbon content as tax criterion (maybe next to energy content)
- Emissions trading means in this context carbon emissions trading
 - Two variants: cap-and-trade design or baseline-and-credit design



around 50
 carbon price
 schemes worldwide
 extremely scattered
 and diverse

Tally of carbon pricing initiatives

- ETS implemented or scheduled for implementation
- Carbon tax implemented or scheduled for implementation
- ETS or carbon tax under consideration
- ETS and carbon tax implemented or scheduled
- ETS implemented or scheduled, tax under consideration
- Carbon tax implemented or scheduled, ETS under consideration

Thesis 1: In theory emissions trading and carbon taxes are functional equivalents

Primary criteria: Effectiveness and efficiency

- ✓ Identical results for equivalent emission reductions, if there is no uncertainty regarding future prices, perfect competition in all markets, no interaction with other policies, and universal coverage (all sources of GHG emissions)
- ✓ Common problem: Treatment of imported products
 - ✓ Border adjustment necessary (see presentation of Michael Mehling)

Thesis 1: In theory emissions trading and carbon taxes are functional equivalents

Primary criteria: Effectiveness and efficiency

Problem of both instruments (for different reasons): Effectiveness depends a lot on international cooperation

- ✓ ETS: carbon market linkage difficult and time consuming
- ✓ CT: multilateral carbon tax agreements difficult to reach, but interesting proposals are being developed at the moment (special problem: aviation)

Thesis 1: In theory emissions trading and carbon taxes are functional equivalents

Primary criteria: Effectiveness and efficiency

Problem of both instruments (for different reasons): Effectiveness stems a lot from the anticipation of future prices

- ✓ ETS: investors rely on future interventions of the legislator in case of strong price increase
- ✓ CT: legislators often reluctant to foresee tax rate rises or to adapt tax rates; formulas for automatic adaption should be developed!

Thesis 1: In theory emissions trading and carbon taxes are functional equivalents

Secondary criteria

✓ Competition

- ✓ Specific treatment of emission-intensive, trade-exposed activities (EITE)
possible within both regimes

✓ Public finance

- ✓ Concept of “double dividend” developed for taxes
- ✓ Revenue recycling and climate protection investments possible in both regimes

Thesis 1: In theory emissions trading and carbon taxes are functional equivalents

Secondary criteria

✓ Distributional impacts

- ✓ Pass-through of costs to consumers
- ✓ Suitable compensation concepts can be designed for both instruments

✓ Instrument mix

- ✓ Both instruments need to be complimented by other politics, e.g. regulation necessary in areas of high abatement costs

Thesis 2: Emissions trading and carbon taxes have specific (dis)advantages

✓ Arguments in favour of Emissions Trading

✓ Environmental effects can be better targeted (cap) ++

✓ Anti-cyclical effects regarding economic development

Thesis 2: Emissions trading and carbon taxes have specific (dis)advantages

Arguments in favour of Carbon Taxes

- Administrative feasibility - implementation of emissions trading highly complex (political transaction costs) ++
- Carbon price volatility and unsecurity regarding policy intervention
- Implementation into a smart instrument mix – ETS and the problem of “water bed effect”
- Danger of market manipulation – affects more ETS

Thesis 3: Their practical advantages depend a lot from their specific design

✓ Emissions trading schemes are often hybrid

- ✓ Combination of cap-and-trade and baseline-and-credit design (e.g. for newcomers like in EU ETS)
- ✓ Practice of price corridors

✓ In praxis emissions trading and carbon taxes are often combined and there are good reasons for that

- ✓ ETS for upstream solutions, CT for decentrelized sources (e.g. transport and buildings)
- ✓ CT can serve as floor price

Thesis 4: Practice of carbon pricing is influenced by political economy

✓ Emissions trading is often preferred due to institutional and political reasons

- ✓ Implementation and/or changes of taxes are often a political „no-go“

- ✓ Tax legislation is often more complicated and burdensome for constitutional reasons

Examples: California, China

The EU Commission favoured carbon taxes, but failed due to unanimity requirement

- ✓ **Path dependency:** Change of instrument choice only for good reasons

Results

- ✓ **Strong reasons for carbon pricing**
- ✓ **Emissions trading and carbon taxes are functional equivalents in theory**
- ✓ **Carbon taxes have strong(er), emissions trading is often preferred for reasons of political economy**
- ✓ **Instrument design and combination more important than instrument choice**

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