

Carbon Taxes

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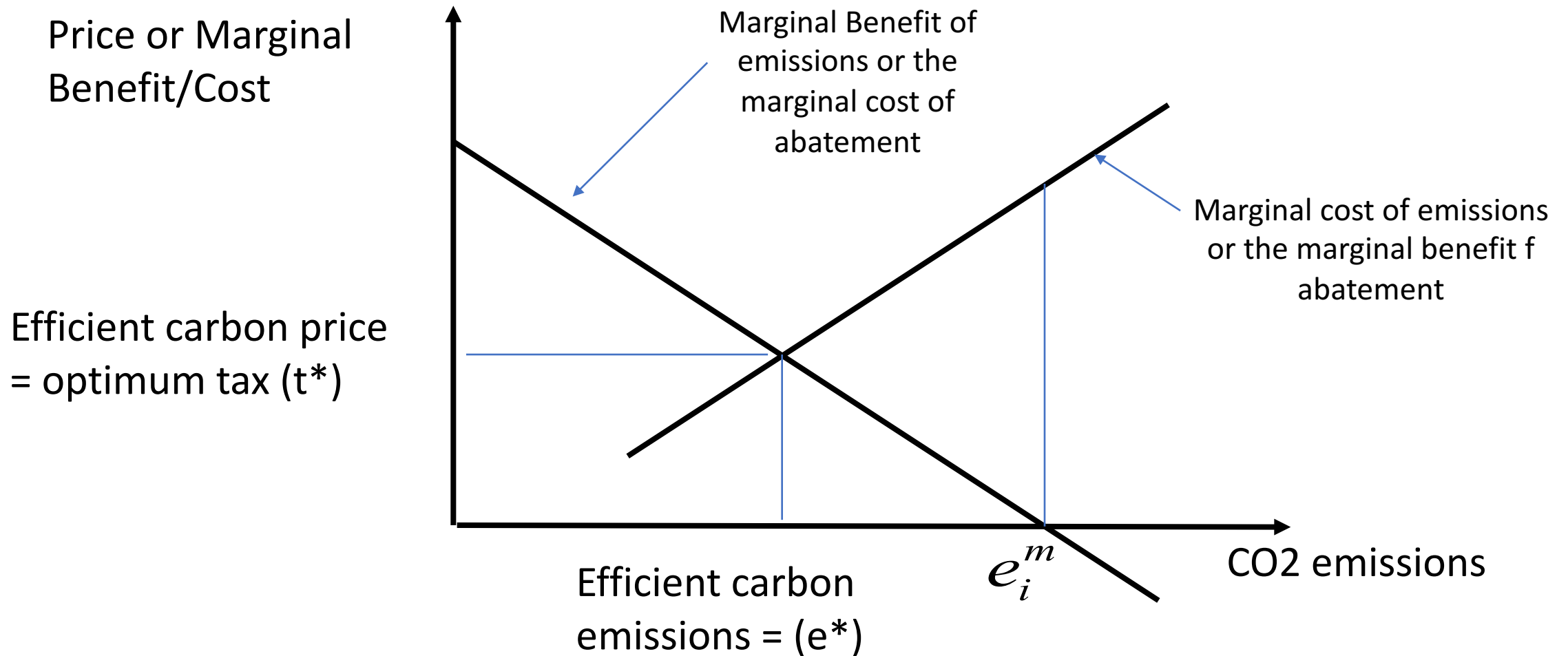
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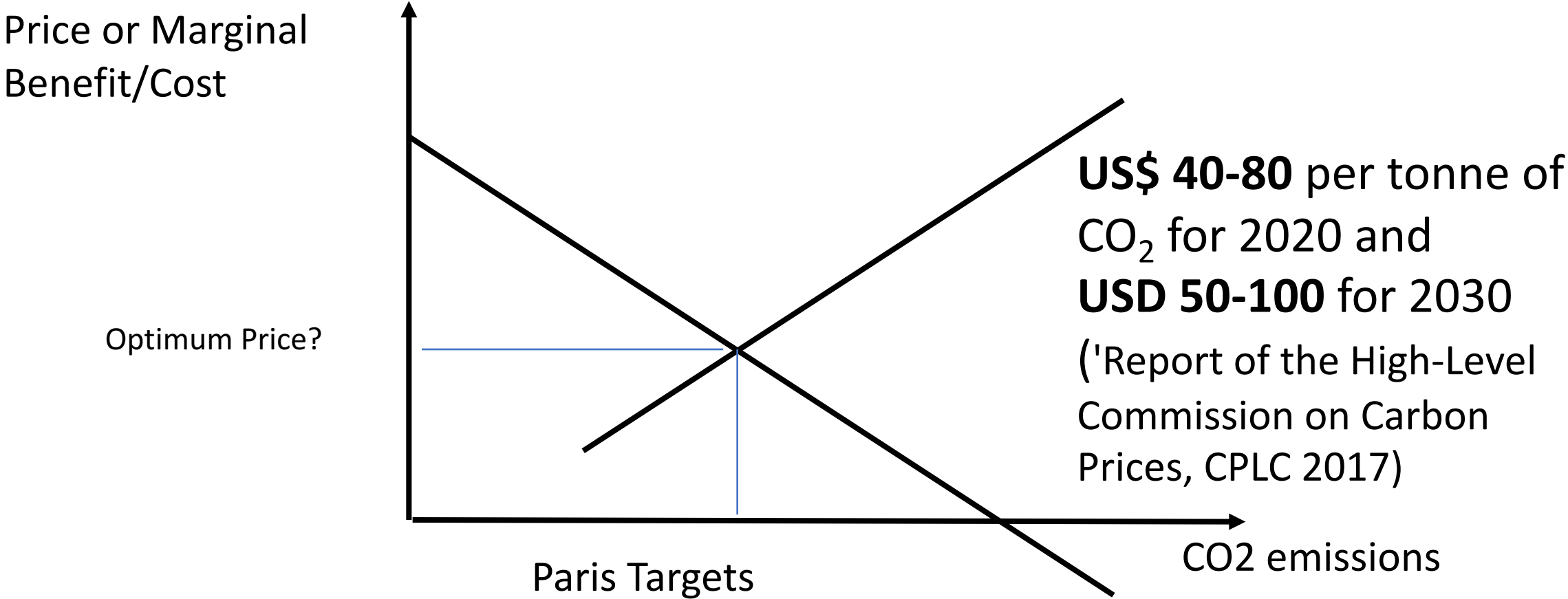
Carbon Pricing Instruments

- Carbon Pricing Instruments (CPIs) are policy instruments that use markets, taxes and/or other economic variables to price carbon emissions.
- CPIs affect the relative cost of the decisions made by economic agents by putting an explicit or implicit price on carbon and forcing economic agents to internalize their external social cost.
 - Eliminate fossil fuel subsidies
 - Social Cost of Carbon in investment projects
 - Internal carbon price in companies
 - Emissions Trading Systems
 - Carbon Taxation

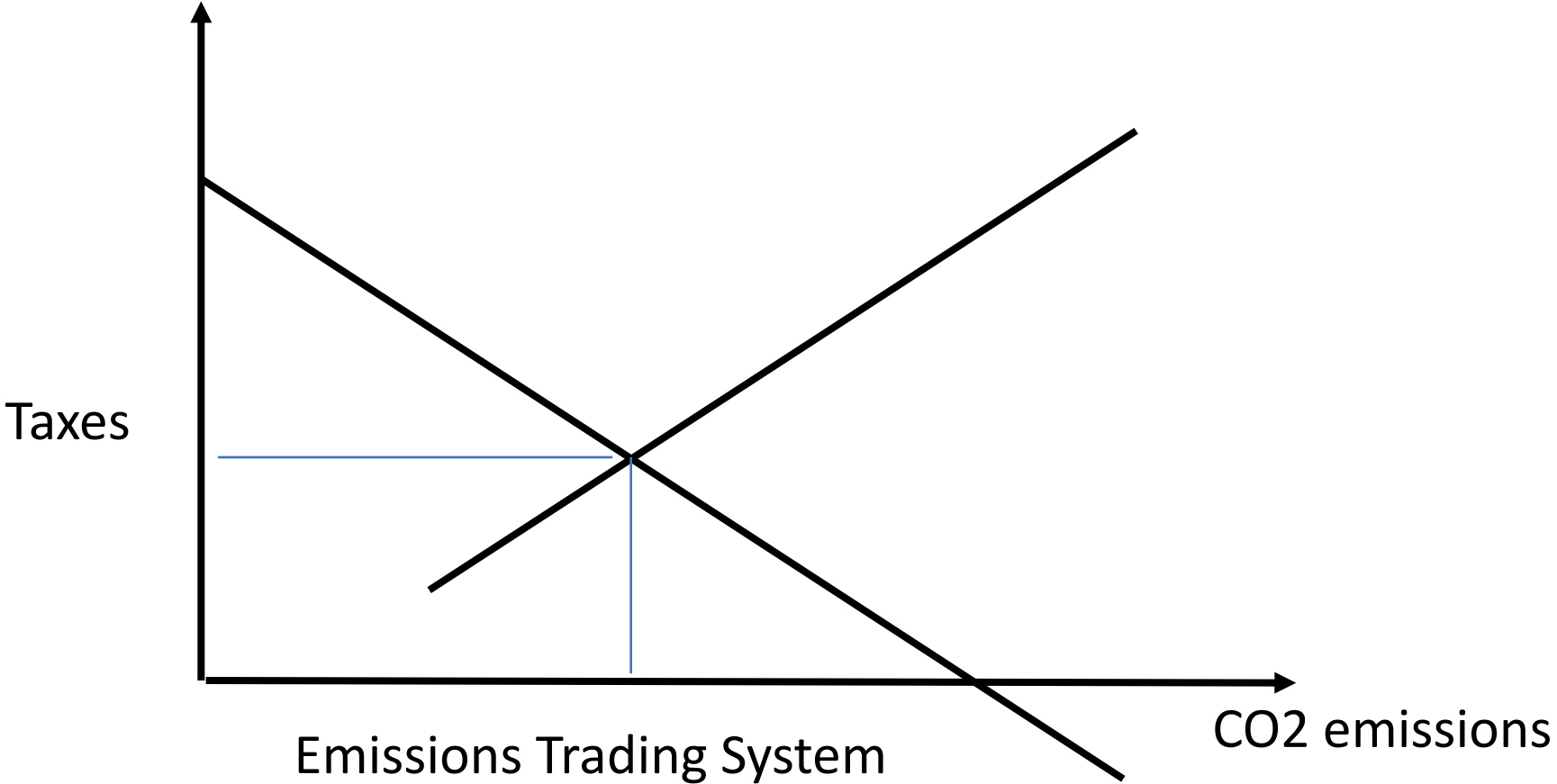
Theory: Efficient level of carbon emissions



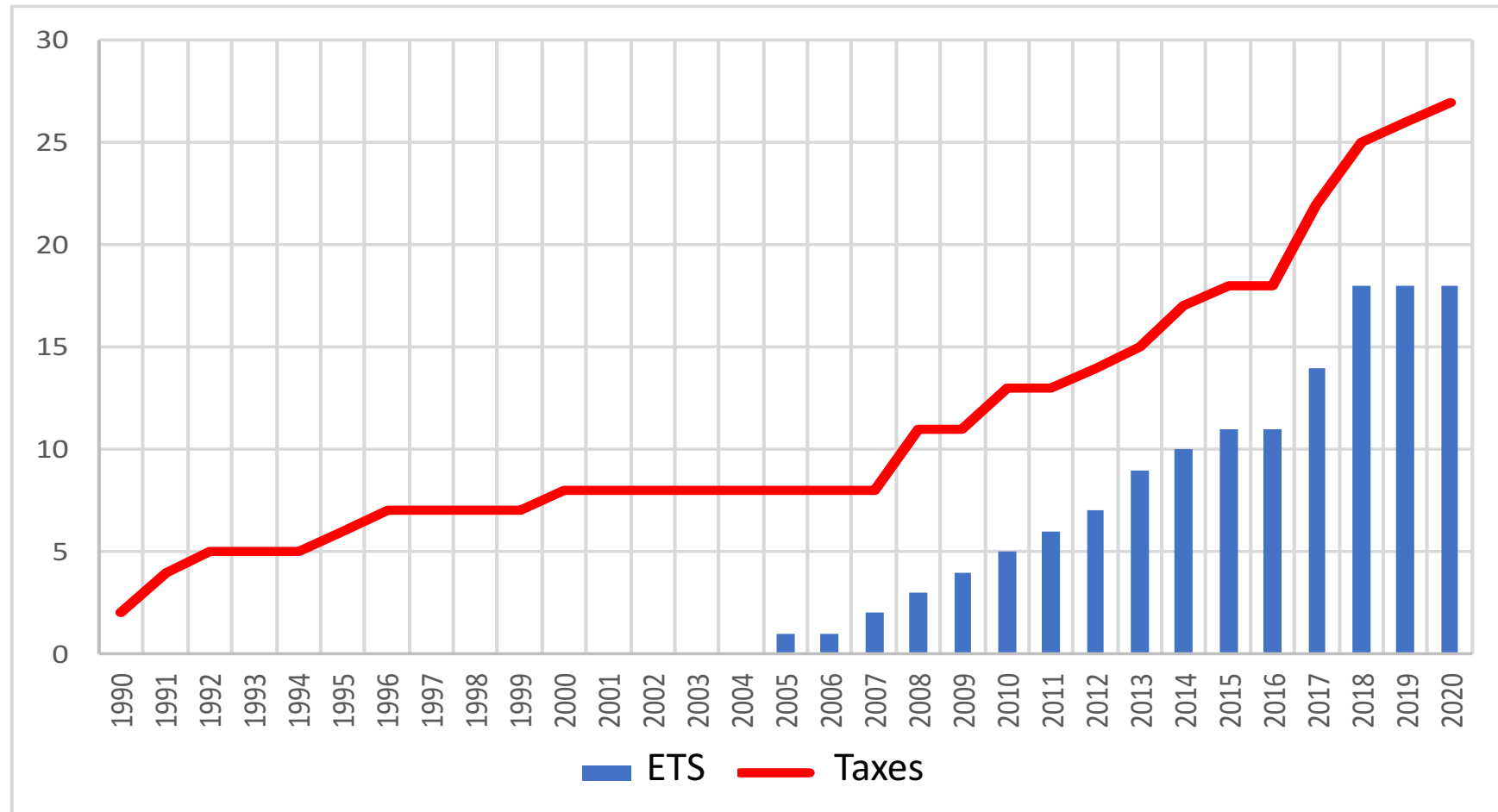
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Evolution of Carbon Pricing Instruments across the world



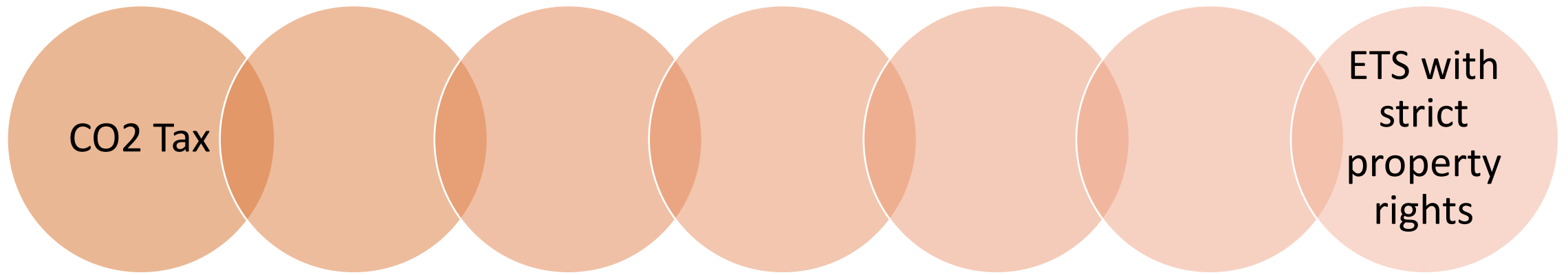
Carbon Taxes around the world

| Jurisdiction | US\$/ton CO2e | Jurisdiction | US\$/ton CO2e |
|------------------|---------------|--------------|---------------|
| British Columbia | 24 | Japan | 3 |
| Chile | 5 | Mexico | 1-3 |
| Denmark | 27 | Norway | 3-56 |
| Finland | 69-73 | Portugal | 8 |
| France | 36 | UK | 24 |
| Iceland | 12 | South África | 8,5 |
| India | 6 | Sweden | 132 |
| Ireland | 24 | Switzerland | 87 |

Comparative advantages of carbon pricing instruments

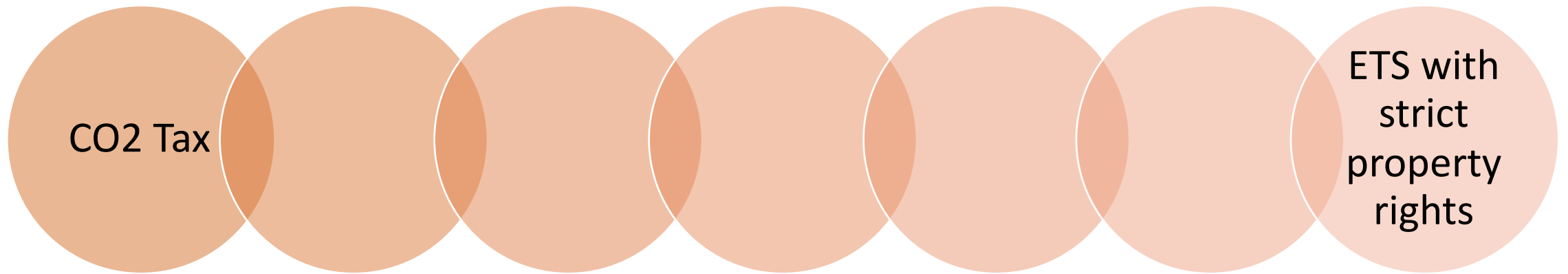
| | Pros | Cons |
|-------|---|---|
| Taxes | <ul style="list-style-type: none">• Easy to implement• Regulatory institutions already exist• MRV relatively simple• Immediately generates revenues• Everyone understands• Applicable to small facilities• Coherent with other policies e.g. more revenue, taxes of local pollutants) | <ul style="list-style-type: none">• Uncertainty in mitigation• Not flexible as a mechanisms of mitigation• More difficult to link• Politically difficult for private sector. |
| ETS | <ul style="list-style-type: none">• Clarity with respect to mitigation.• Allows for allowance trade, reduces mitigation costs.• Possible to link• Coherent with climate policies (inventories, registries) | <ul style="list-style-type: none">• Difficult to implement• Requires more sophisticated MRV• High level of security in MRV• Requires new institutions• New regulatory entity• Distribution of allowances complex• Uncertainty in price. |

Comparison between Carbon Pricing Systems



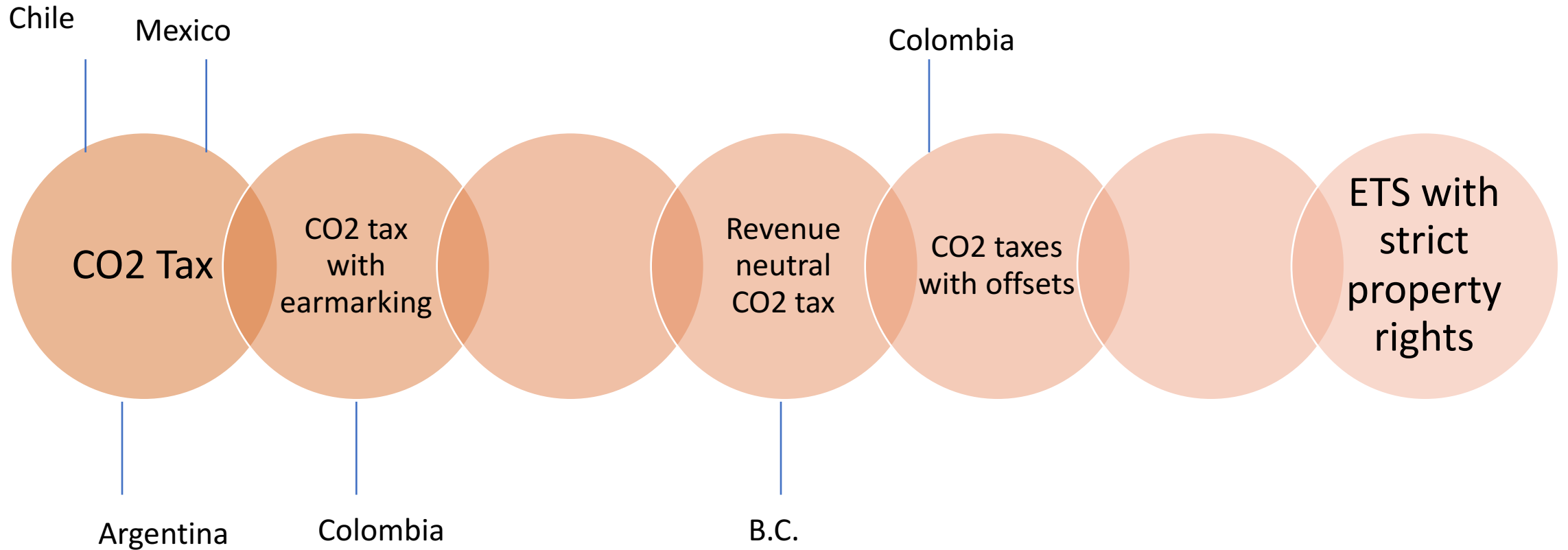
Comparison between Carbon Pricing Systems

Actually a mechanism that fixes price and lets emissions adjust



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Specific design elements determine the nature of the CPI



Committee of Experts on International Cooperation in Tax Matters and its Subcommittee on Environmental Taxation Issues.

- The Subcommittee on Environmental Taxation issues is mandated to:
 - Assist developing countries in the area of environmental tax issues.
 - Pay particular attention to the application of carbon taxes.
 - Report current country practices, policy considerations and administrative issues.

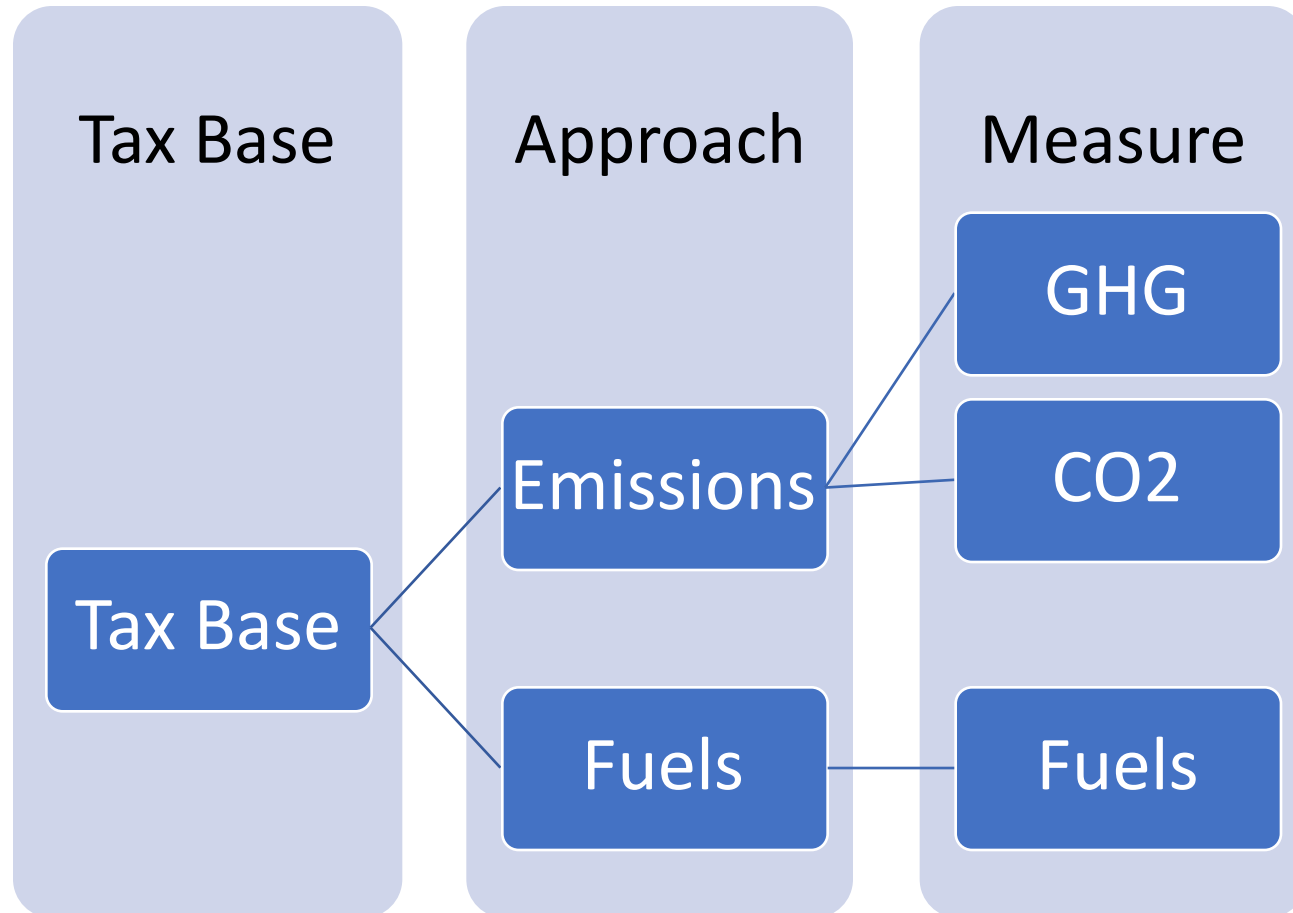
The Handbook on Carbon Taxation

- Aimed to provide practical guidance on how to design and implement a carbon tax;
- Specific guidance for government officials of developing countries;
- Present (in a non-prescriptive way) why countries may choose carbon taxation among other instruments, and what are the options available;
- Intended also to provide a framework for policy makers of countries that are considering to implement fiscal measures for environmental protection.

Special characteristics of CO₂

1. It's a gas!: Emissions factors are accurate, no technical need for emissions measurement and control.
2. But also abatement (at least now) is not possible. CO₂ must be reduced by changing processes or fuels.
3. Damage is global – Reduction in a ton of CO₂ anywhere is beneficial to all.
4. Abatement/Reduction costs vary widely across jurisdictions

Design Choices (Measurement)



Advantages

- Strengthen MRV system.
- Regulate sources.
- Facilitates move to ETS.

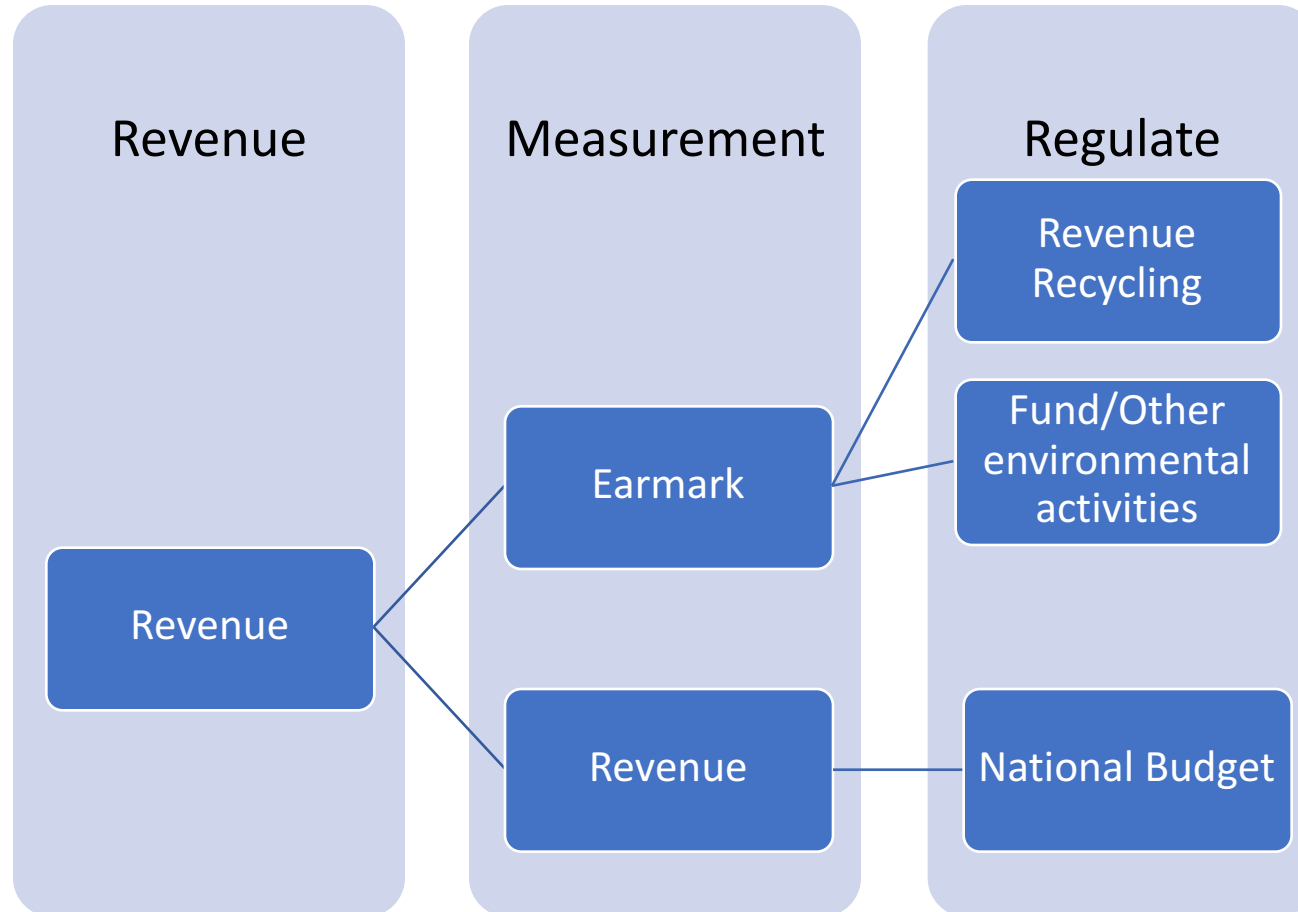
- Simple to implement
- No need for complex institutional infrastructure

Disadvantages

- Complex
- Need MRV

- More difficult to move to market instruments.
- No Reporting at source

Design Choices (Revenues)



Advantages

- Reduces costs to agents
- Promotes other environmental activities.
- Politically more feasible.

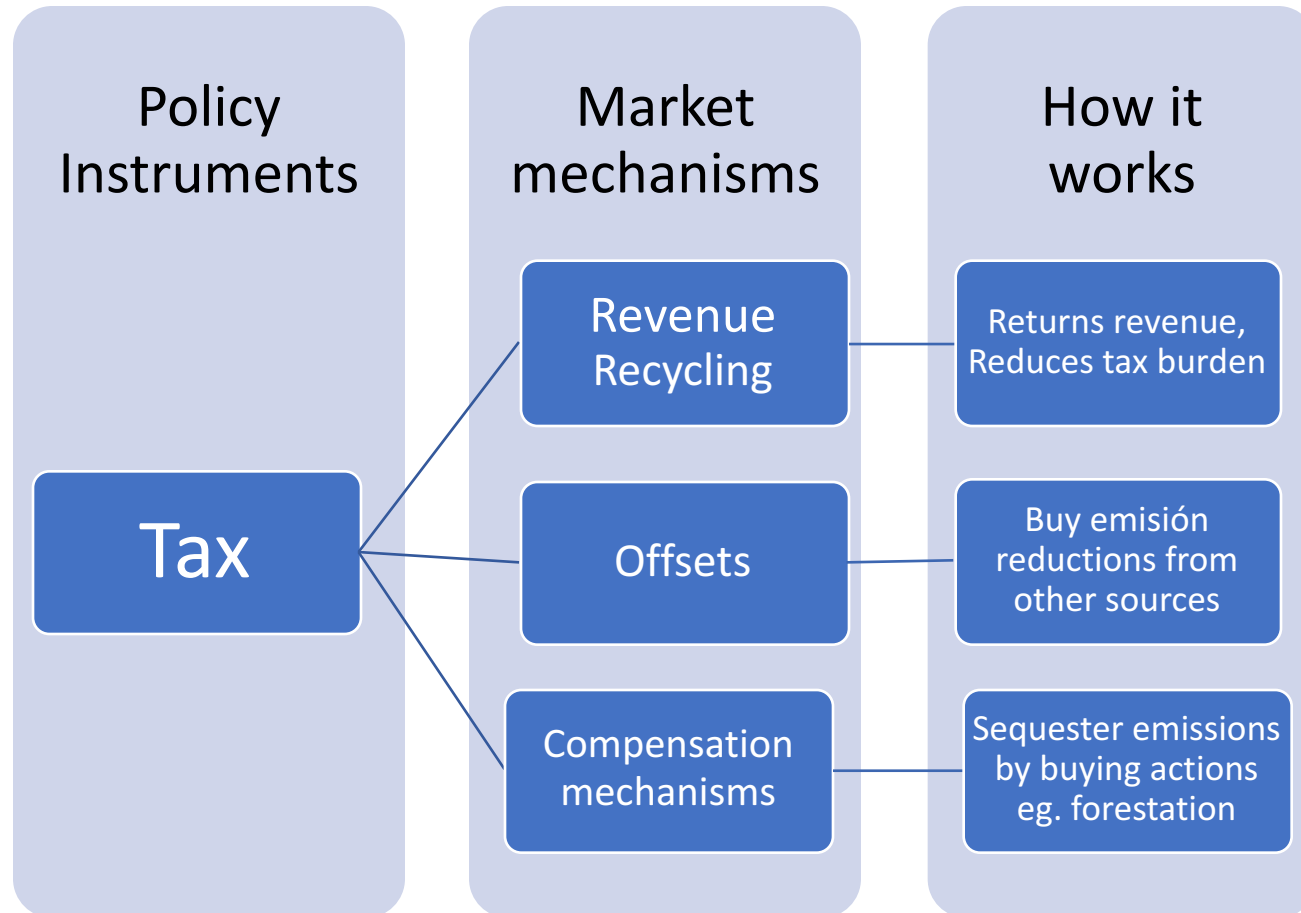
- Increase revenue for other development objectives

Disadvantages

- Less Revenue
- More complex
- Generates private interests

- Not understandable for stakeholders. Maybe less politically viable

Design Choices (Markets)



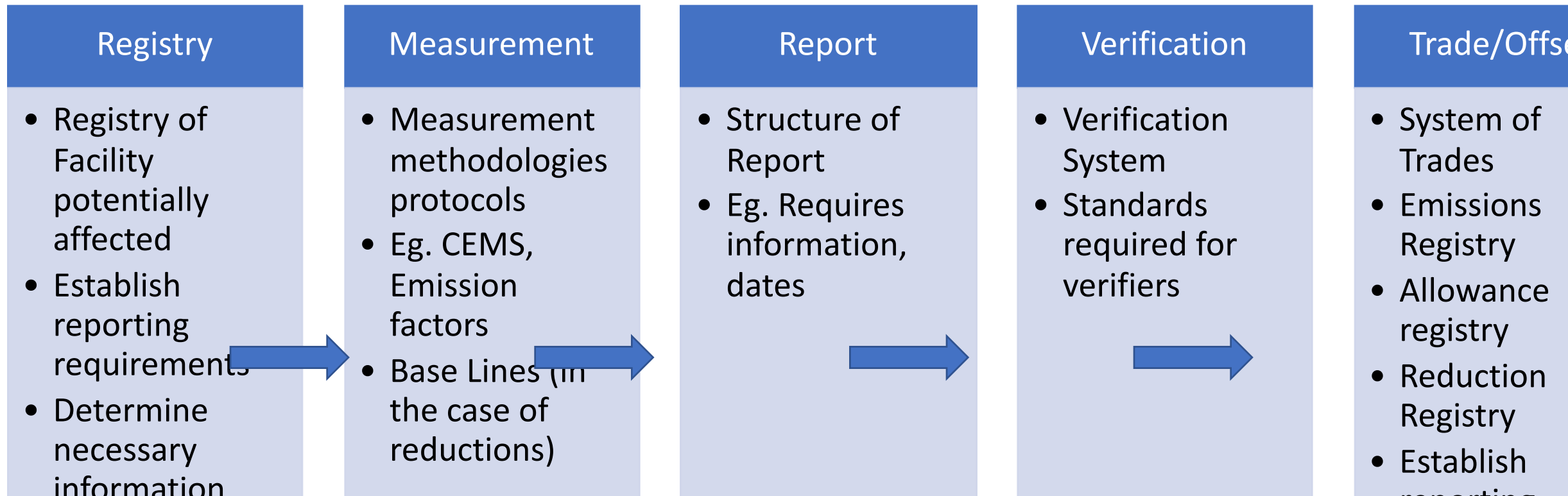
- Market mechanisms:
- Let market determine price.
- Reduce costs to economic agents.
- Allow compliance flexibility.
- Support other sustainable activities

Issues of concern

- Administration and implementation
 - Equity
 - Competitiveness
 - Carbon Leakage
 - Broader markets and trading?
-
- However you can start low, develop institutional infrastructure and move on

Institutional Infrastructure for more complex CPI

Institutions, Rules, Regulatory Frameworks and Practices that implement the CPI



Advantages of Broader Market

- Basic premise: Marginal damage is the same across jurisdictions, marginal abatement costs differ widely.
- Broader market will:
 - Reduces marginal costs of climate mitigation
 - Compliance flexibility
 - Facilitates spillovers and innovation across jurisdictions
 - Reduces leakage
 - Reduces administrative costs

Taxes in America

| Jurisdictions | Carbon Taxes in America | | | | |
|------------------|--|---|------|--------------------------------------|------------------------|
| | Tax Charact. | Tax Base | Year | Tax Rate (USD/Ton CO ₂ e) | National Cover (% GEI) |
| Argentina | Part of fuels tax administration | All fuels except biocombustibles | 2018 | 1 – 10 (2019-2028) | 40 |
| Colombia | With earmarking and offsets | All fuels except coal | 2017 | 5-10 | 16 |
| Chile | Based on technology and with local tax | CO ₂ emissions boilers and turbines (>50 MW); All sectors except biomass | 2017 | 5 | 42 |
| México | Part of a broader reform commitment to move to ETS | All fuels except gas | 2014 | 1-4 | 30 |
| British Columbia | Recycle revenues | All minimum exceptions | 2008 | 24 | 70 |

Steps to move forward with CPI

- Reduce/Eliminate fossil fuel subsidies
- Introduce the social cost of carbon
- Introduce a carbon tax/ETS
 - Start low
 - Develop institutional infrastructure
 - Explore more complex market instruments
 - Offsets, compensations, etc.
 - Explore broader markets
 - Common MRV systems
 - Converge carbon price eg. US\$30/30 rule, or US\$50/50

In Sum

- Carbon taxes are an essential policy instrument for climate change.
- Many advantages that go beyond price incentive.
- Varied design choices from simple to complex.
- Can start with low prices and move on from there
- A broader market has significant advantages in reducing costs and reducing emissions.
- This is an essential policy instrument to comply with Paris Targets and beyond

Thank you

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