Issues in Comparing Effort in Heterogeneous Systems

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Comparison and Linkage of Mitigation Efforts in a New Paris Regime
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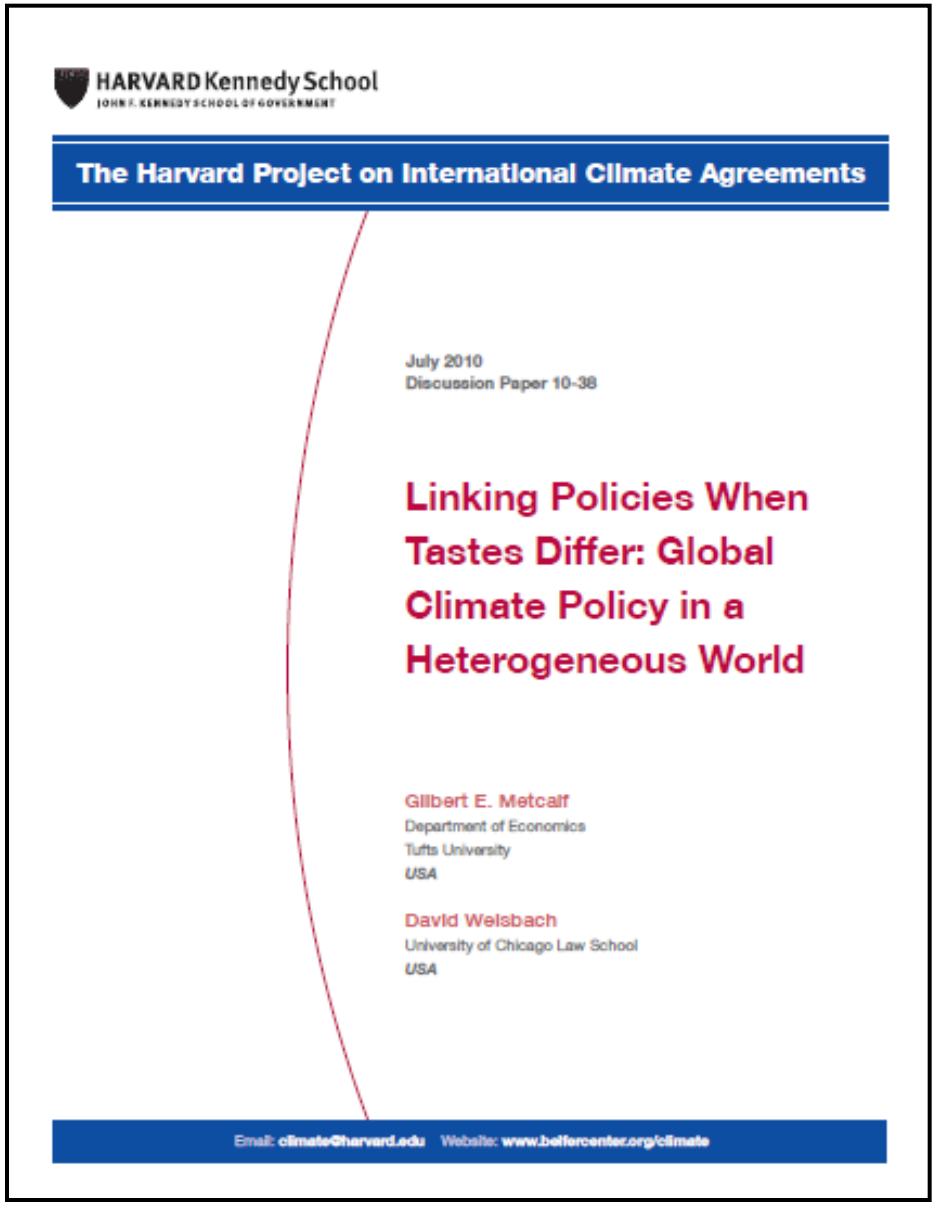
Harmonization and Linkage

- Efficiency costs of unharmonized regional approach
  - Foregone opportunities to reduce emissions at least cost
  - Carbon leakage
  - Thin trading markets for cap and trade systems
- Linking systems reduces these costs
- Linkage: “policies that allow for regional carbon regulations to interact to narrow or eliminate differences in the marginal cost of abatement between different regions or countries”

Heterogeneous World

- INDC focus on targets & timetables
  - 26-28% emission reduction by 2025
  - Peak carbon emissions by around 2030
  - ~30% reduction in emissions intensity by 2025
- Measures to achieve targets can vary
  - Cap and trade systems
  - Carbon charge systems
  - Emission reduction credit systems
  - Command and control regulations



Symposium:
Post-Kyoto International Climate Policy Architecture

Linking Policies When Tastes Differ: Global Climate Policy in a Heterogeneous World

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http://belfercenter.ksg.harvard.edu/files/MetcalfWeisbachFinal.pdf

Linking Cap and Trade with Tax Systems

- In principle linkage is possible
  - Permits used in lieu of tax payments
  - Emission Tax Payment Credits (ETPCs) used in lieu of permits
  - ETPCs issued for carbon tax payments in excess of its emissions
- Unrestricted linkage unlikely
  - Arbitrage converts cap and trade to a tax
- Payments are transfers with political implications

Linkage Through Emission Reduction Credit Systems

- Linkage with cap and trade exists (CDM, JI)
- Linkage with tax systems straightforward
  - ERCs in lieu of taxes
- All problems with ERCs (e.g. additionality) apply equally to both linkage systems

Linking with Regulatory Systems

- Quantity limits could give rise to ETPC-like credits that could be used to link with cap and trade or tax systems
  - Reductions in excess of required reductions give rise to credits
  - Similar approach possible for intensity standard systems

Linking with Regulatory Systems

- Challenges for technology mandates
  - Additionality
  - Determining emission reductions associated with mandate
- Linkage in principle possible
  - Some mandates might provide linkage opportunities (e.g. fuel economy standards in excess of mandated level)

An Example

Country	A	B
Target	Emission Target	Intensity Target
Policy	Cap & Trade	Regulations
Anticipated Emissions	200	*300*
Anticipated MAC	*$45*	*$25*
Linkage	Credits created for greater intensity stringency	
Ideal Outcome	Credits allow loosening of cap in A and reduction in MAC	Greater stringency raises MAC in industry; financial inflows finance investment
Questions & Issues	• Quality of GDP forecast in B • Allocation of intensity target to specific industries and firms • Financial inflows and investment raise GDP in B; emissions cap loosened • Dynamic policy consistency	

Implications of Heterogeneity

- World of homogeneous approaches difficult
  - Comparability of effort
  - Credibility of commitments
- Heterogeneity adds additional complexity
- Complexity suggests the need for detailed rules and regulations
  - Is there an appetite for strong, centralized regulatory oversight?