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Trade and Climate Change: Challenges and Opportunities



Trade and Climate Change regimes: Synergies

- **Shared objectives and modalities**
 - Truly global benefits
 - Fundamental for development
 - Multilateral action
 - Recognize the need of developing nations (special and differential treatment, common but differentiated responsibilities)
- **Yet, climate and trade agendas have evolved largely independently.**



Trade and Climate Change Regimes: Concerns

Environmentalists

- Increasing global trade will increase GHG emissions

Free Traders

- Climate change measures will hurt country and industry competitiveness
- Industries will relocate to countries less strict climate policies
- Carbon related border measures may stifle trade flows



Trade and Climate Change: Key Questions

- Do climate change measures affect competitiveness?
- Is there a leakage of carbon-intensive industries from countries with stronger climate change policies to countries with weaker policies?
- Can one justify climate-related trade measures under the WTO ?
- What are the trade barriers to existing clean energy technologies?
- What are the implications for the ongoing trade negotiations?



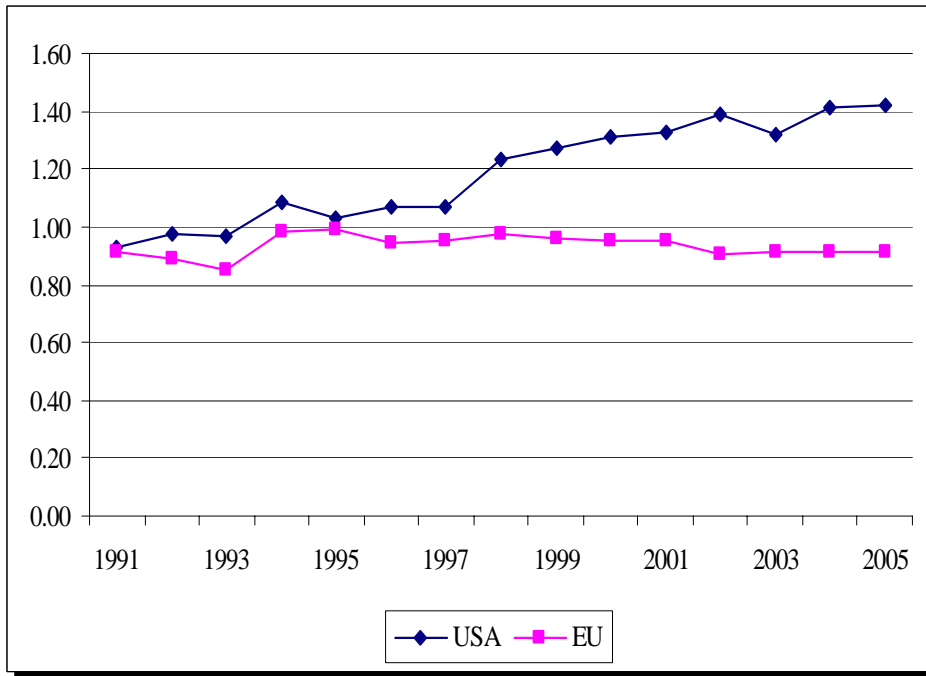
Competitiveness Concerns: Misconceived?

	Expected Results	Actual Results (for all industries)	Actual Results (energy-intensive industries)
Carbon Tax	On the exporting country		
Carbon tax by an exporting country	Negative	Not significant	Highly significant (positive)
Carbon tax by an importing country	Positive	Marginally Significant (negative)	Highly significant (negative)
Both exporting and importing countries have carbon tax	Neutral or marginal decline in trade	Not significant	Highly significant (positive)

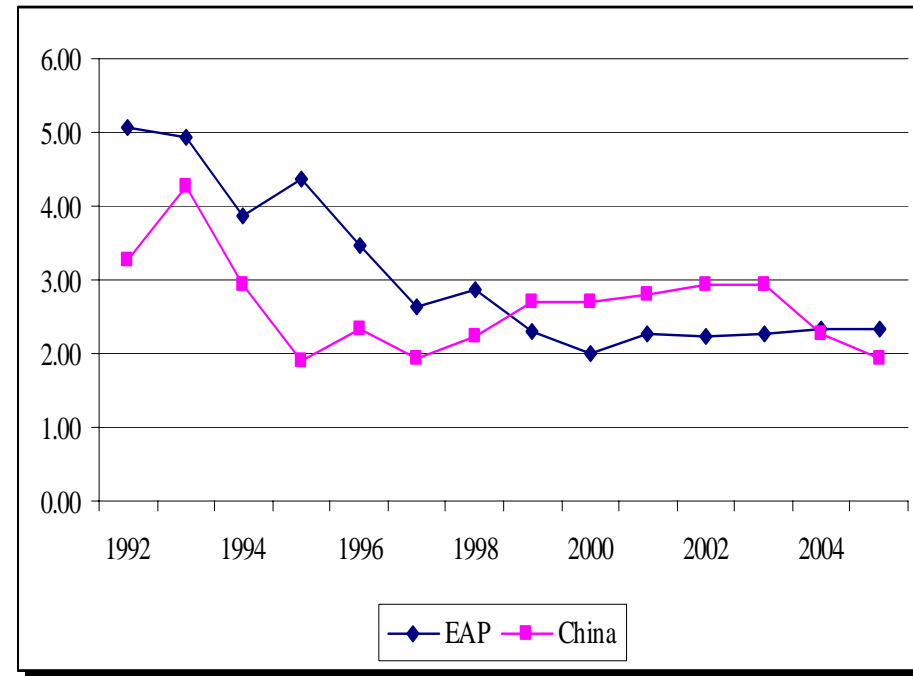


Carbon Leakage: What is the evidence?

Import-Export Ratio of Energy-Intensive Products in the U.S. and EU



Import/Export Ratio of Energy-Intensive Products in East Asia and China

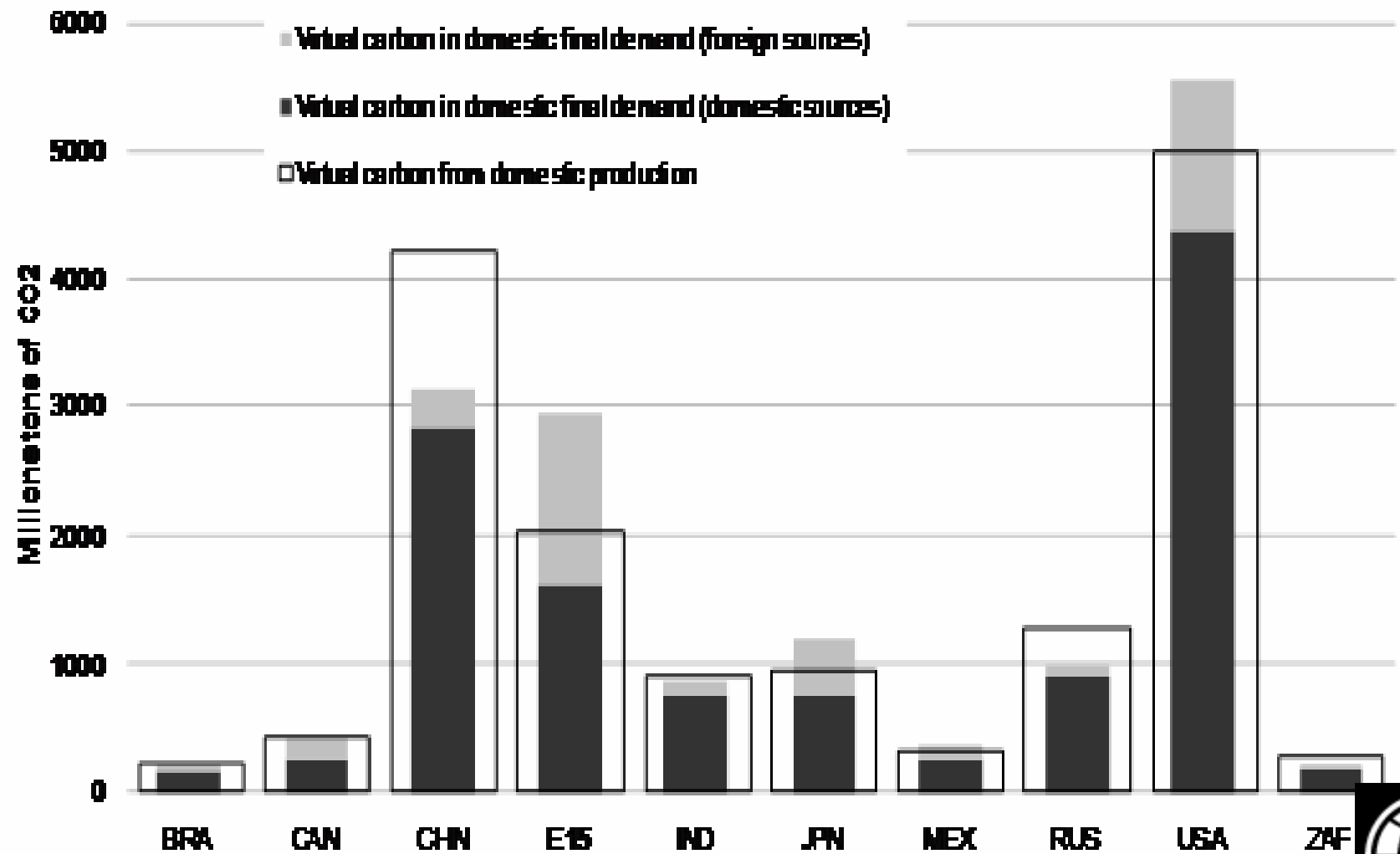


Use of Trade Measures for Promoting Climate Objectives

- Draft climate legislations in the EU and US include proposals to impose restrictions on imports from countries that are not making 'satisfactory' efforts to mitigate greenhouse gas emissions.
- The decision on 'satisfactory' progress would be made unilaterally by the importing countries.
- If passed in their current form, this would require purchases of greenhouse gas emission allowances in order for emission intensive goods to be exported to the EU and US.



Carbon Content of Domestic Production, Consumption and Exports



Taxing Virtual Carbon

Average tariff on imports of goods and services if virtual carbon is taxed at \$50/ton CO2

	BRA	CAN	CHN	E15	IND	JPN	MEX	RUS	USA	ZAF	Aver.
BRA	0.0%	3.4%	3.2%	3.2%	2.8%	4.0%	2.7%	2.6%	3.0%	2.9%	3.1%
CAN	4.5%	0.0%	3.4%	3.4%	3.7%	3.2%	2.8%	2.8%	2.6%	3.0%	2.8%
CHN	12.1%	10.5%	0.0%	10.5%	13.4%	10.4%	9.9%	10.0%	10.3%	11.1%	10.5%
E15	1.6%	1.1%	1.1%	0.0%	1.3%	1.2%	1.1%	1.1%	1.2%	1.2%	1.2%
IND	8.3%	7.8%	9.2%	7.7%	0.0%	6.8%	8.1%	8.7%	7.9%	5.3%	7.8%
JPN	1.4%	1.3%	1.5%	1.4%	1.6%	0.0%	1.4%	1.4%	1.2%	1.3%	1.4%
MEX	3.5%	2.1%	4.2%	4.0%	10.8%	4.0%	0.0%	4.1%	1.7%	3.5%	2.1%
RUS	18.0%	14.3%	12.4%	11.8%	12.8%	11.3%	14.7%	0.0%	10.4%	15.9%	11.7%
USA	3.3%	3.0%	3.1%	3.1%	3.3%	3.0%	2.8%	2.8%	0.0%	3.2%	3.0%
ZAF	15.9%	10.1%	10.6%	9.8%	11.5%	11.4%	16.6%	7.9%	8.9%	0.0%	10.1%
Aver.	3.7%	2.9%	2.2%	5.0%	4.5%	4.8%	3.3%	2.6%	3.0%	2.9%	

Note: the importing country is the column; the exporting country is the row; the last column is the trade-weighted average tariff faced by the exporting country; the last row is the trade-weighted average tariff applied by the importing country.

Source: authors.



Trade in climate-friendly environmental goods

Year	Trade in Climate Friendly Technologies WTO Members (in US\$ billions)			
	High-Income		Low-and Middle-Income	
	Imports	Exports	Imports	Exports
2002	24.865	26.629	14.651	9.229
2003	27.605	29.678	17.649	10.952
2004	35.514	40.212	23.847	14.785
2005	42.023	46.088	27.319	18.606
Compound Growth	17.3	18.3	21.6	25.4

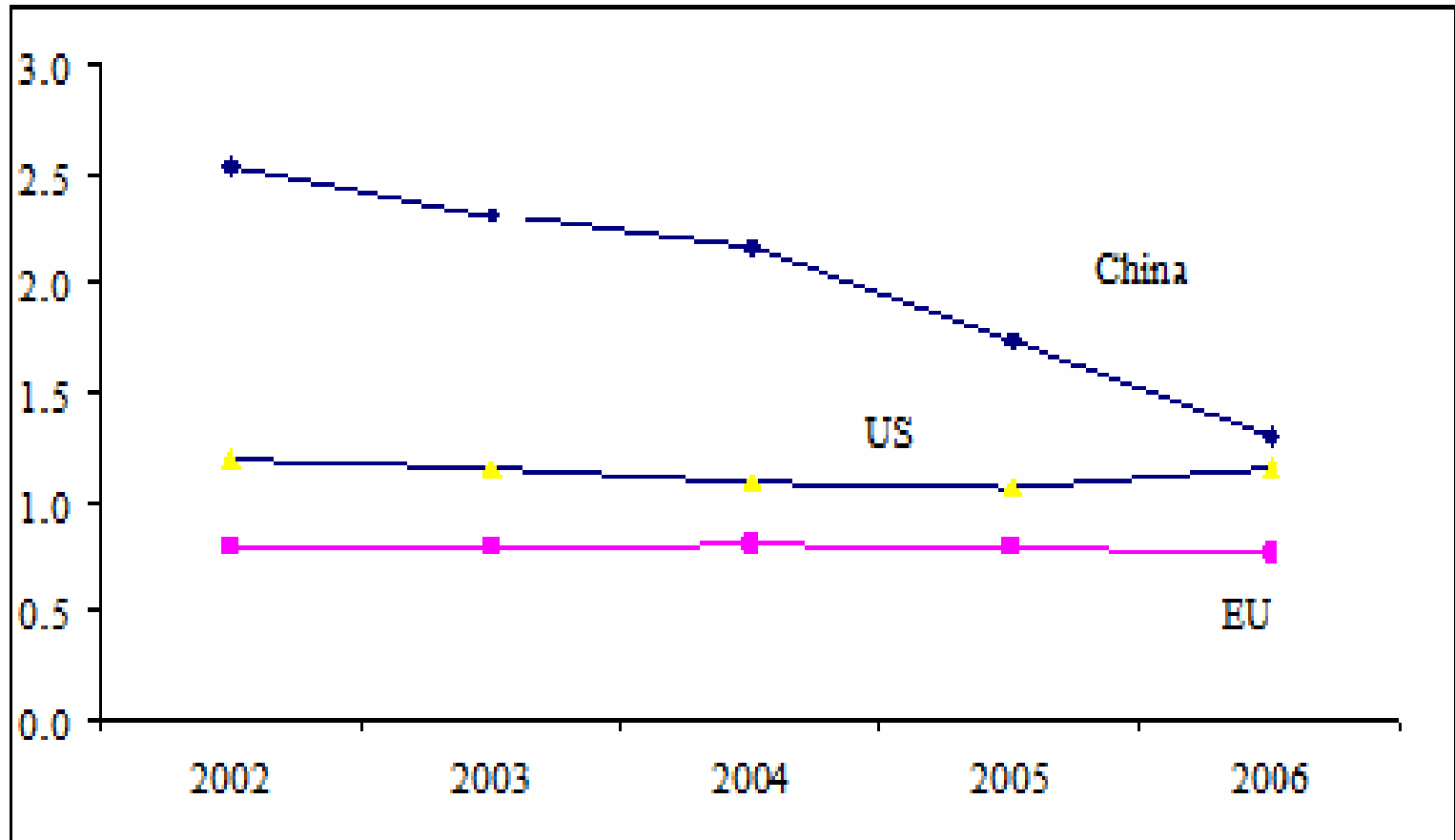


Estimated Benefits of Liberalizing Select Clean Energy Technologies

	% increase in trade volumes	
	Removal of tariffs	Removal of tariffs and NTBs
Clean coal	3.6	4.6
Wind	12.6	22.6
Solar	6.4	13.5
Energy efficient lighting	15.4	63.6
Total	7.2	13.5



Import/Export Ratio of Clean (climate-friendly) Technologies



WTO proposal would increase the Chinese exports of climate friendly technologies to the US by about 8.4 percent.

Beyond Trade: Investment Barriers

Domestic barriers

- Lack of policy and regulations
 - Lack of an energy policy (at the national and/or local level) that includes deployment of renewable generation capacity
 - Lack of purchase agreements for independent producers
 - Lack of policies supporting mandatory or voluntary energy efficiency standards for appliances, buildings and vehicles
 - Inadequate environmental regulation and enforcement
 - Lack of incentives (taxes, subsidies etc.) that promote renewable energy and energy efficiency.
 - Lack of financing/credit mechanisms to obtain capital to finance renewable projects
- Technical Barriers
 - Lack of technical standards for appliances
- Intellectual Property Rights Regimes



Conclusions

- Unilateral imposition of virtual carbon tariffs would clearly be a source of trade friction damaging an international trading system that is already being stressed by the current financial crisis.
- The huge potential for trade between developing countries (South-South trade) in clean technology should be recognized.
- Developing countries will need to build their capacity to better understand and respond to these developments.
- It is in the interest of developing countries is to ensure that the pursuit of global climate objectives is compatible with maintaining a fair, open, and rule-based multilateral trading system as a foundation for their growth and development.



Thank you!

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