

Trade in a Green-Growth Development Strategy: Global Scale Issues and Challenges

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Outline

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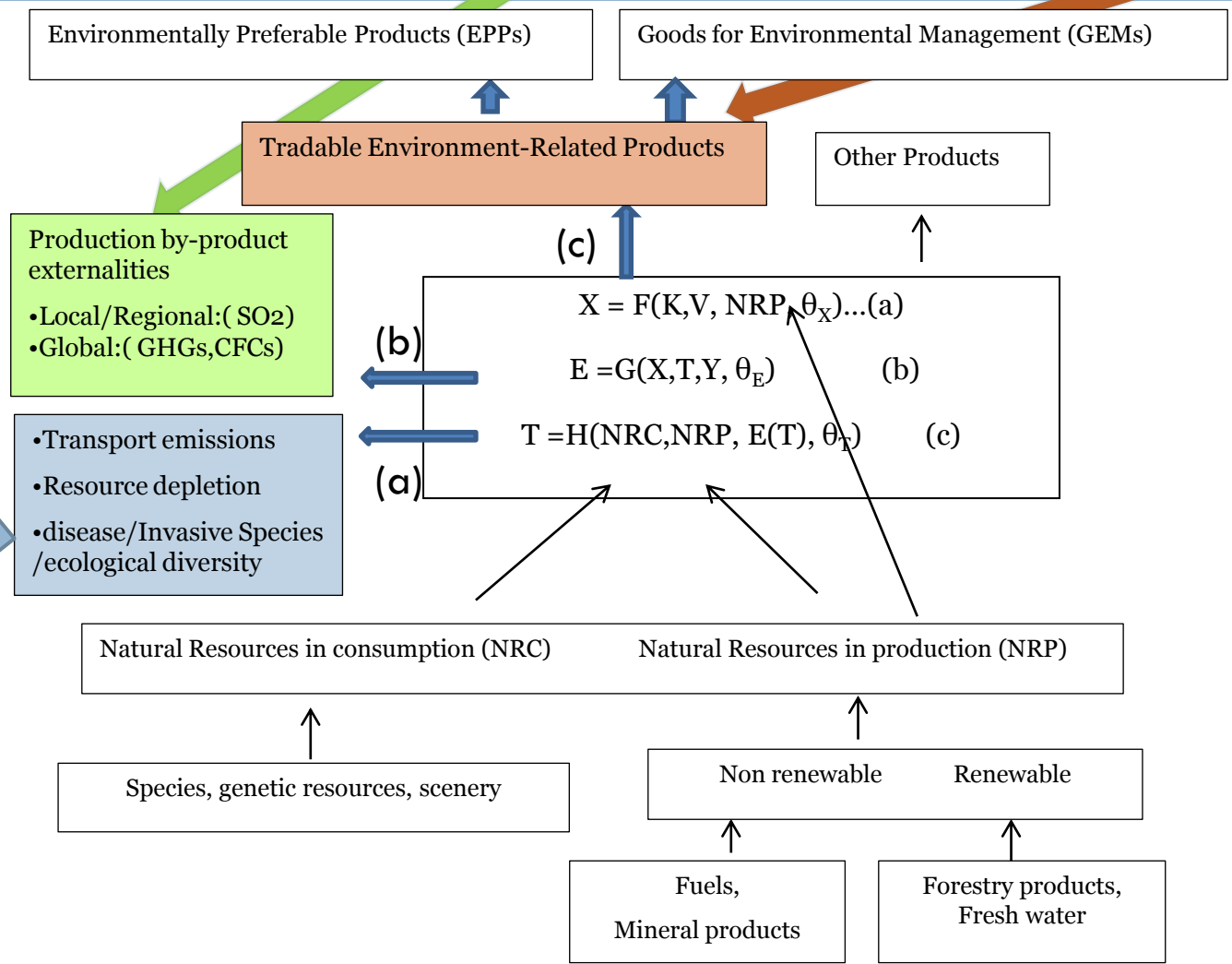
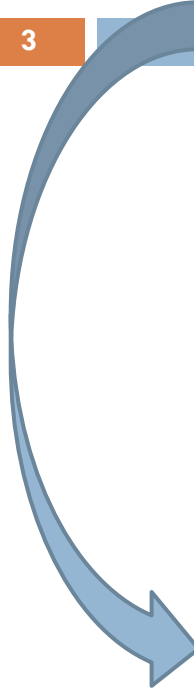
- Channels of Interaction
 - Direct Trade-Related Linkages
 - By-product externalities
 - Pattern of Production
- Climate: Pollution-Havens, Trade Leakages and BTAs
 - Pollution Havens?
 - Climate Change Mitigation, Leakages and BTAs
- Implementation Difficulties: Political Economy Considerations
 - Selecting a BTA: Steel Case
 - Failure at Doha on fisheries
 - Failure at Doha on Environmental Goods and Services (EGS)
- Concluding Remarks

Channels of Interaction

(a) Direct Trade Environment Linkages

(b) by-product externalities

(c) Pattern of production



Climate Change Mitigation: 4 Roles for Trade

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1. Portfolio of green technologies carbon-free necessary
Will require huge R&D effort (private and public). For which open WTS is needed to diffuse technological progress
2. Threat of trade sanctions as under Montreal protocol to entice participation (deter 'free-riding')
3. Trade measures to correct for carbon leakage (aka 'pollution haven' effect). (border tax adjustments)
4. Large differences in abatement costs, so need to separate where abatement takes place from who pays the costs (carbon-credit trading system as in e.g. ETS).
Carbon-motivated free-trade areas?

Climate: Pollution Havens, Trade Leakages, and Border Tax Adjustments (BTAs) (i)

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- Pollution Havens?
 - Energy-intensive sectors are weight-reducing = Not footlose (not much world-wide leakage for SO₂ over period 1990-2000). Relevant for CO₂?
 - Small pollution haven effects in bilateral trade (strong composition effects as NN dominates NS trade so PCI is not much affected by environment policies)
 - Factoring in FDI--mostly directed to EPZs likely to lead to cleaner exports (supporting evidence from China).
 - ...but 'virtual trade in carbon' (see next slide)

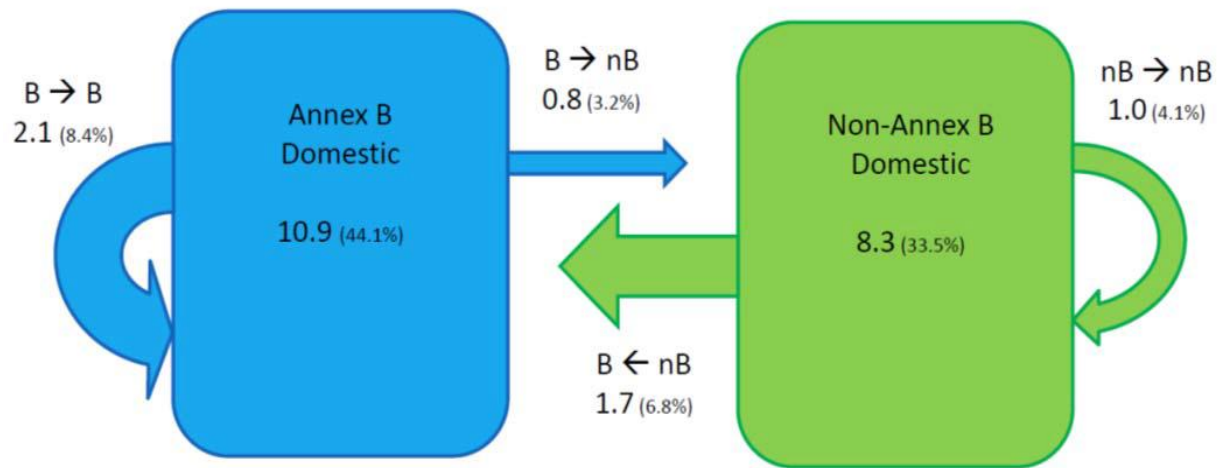
'Virtual Trade' in Carbon

(Peters et al. 2011)

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Kyoto Carbon Cycle (1990-2008) ^{TSTRD}

Cumulative Gt CO₂/year (% global)



Annex B
Production: 13.7 (55.6%)
Consumption: 14.7 (59.3%)

Global
24.7

non-Annex B
Production: 11.0 (44.4%)
Consumption: 10.1 (40.7%)

Leakage and Border Tax Adjustments: Simulation Estimates (I)

Multi-regional General equilibrium (MR-GE) estimates

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- ❑ Estimates largely driven by strong Terms-of-trade (TOT) effects
 1. Calibration on Stern report: Linkage via trade (i.e. TOT improvements from reduced consumption) increases participation decision of US or China but damage has to be about 5 times larger than Stern estimates. BRICs would need compensation of \$150 billion per year to participate.
 2. Models predict that BTAs can reduce leakage rate by half (inefficiency because of strong TOT improvement from BTA leading to leakage).
 - ❑ Individual cut of emissions by US or EU Leakage rate = 35%
 - ❑ Joint reduction by EU and US, Leakage rate = 20%

Leakage and Border Tax Adjustments: Simulation Estimates (II)

Multi-regional General equilibrium (MR-GE) estimates

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1. Effects of BTAs. First-order effects of a \$50/ton CO₂ tax on all regions: =10% export tax on China; EU=1.2%; US=3.1%
2. EX: Take emission reduction of industrial countries= 17%
 - ▣ with adjustment by applying CO₂ tax = developing countries exports fall by 2%;
 - ▣ with BTA based on carbon-content of imports = developing countries exports fall by 15%

Implementation Difficulties: Political Economy Considerations

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Which Border tax adjustments (BTA) Steel case (Moore, 2010)

Table 4: Satisfying Policy Constraints

Constraint	Baseline Scenario	Scenario 1: Firm-specific tax	Scenario 2: Average foreign emissions	Scenario 3: Average domestic emissions	Scenario 4: "Best available" U.S. technology	Scenario 5: "Worst available" U.S. technology with foreign firm submissions
1.a Domestic firm buy-in	N	Y	?	N	N	?
1.b Foreign firm buy-in	Y	N	N	N	Y	?
2. Incentives for foreign firm CO2 reduction	N	Y	N	N	N	Y
3. Adherence to WTO rules	Y	Y	N	N	N	Y
4. Administrative tractability	Y	N	N	Y	Y	Y

Notes: Y=Plausibly does satisfy constraint; N=Does not plausibly satisfy constraints; ?=unclear

None among BTA adjustments meets all the constraints for being implementable

The Doha «no-Mandate-effects» (I)

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- The subsidy problem (fossil fuels, water....and fisheries "Non-actionable). Huge problem for a green growth development strategy.
- Can this be fixed at WTO? Or should it be in another international organization (World Climate organization?)
- Doha Art. 28. mandate on fisheries «..participants shall also aim to clarify and improve WTO disciplines on fisheries subsidies...»
- No agreement partly due to S&DT....yet fish are «more visible» than climate...

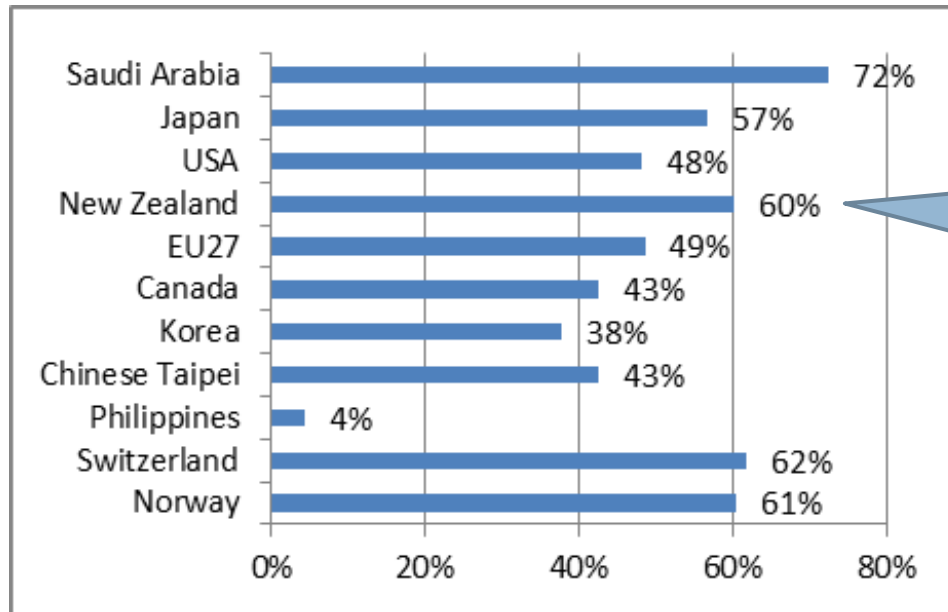
The Doha «no-Mandate-effects» (II)

- Art. 31. Countries mandated to identify Environmental Goods and Services (EGS) and negotiate reduction in protection for EGS
- Problems identifying EGS
 - ▣ Multiple-end use for GEMs
 - ▣ Relativism, attribute disclosure, 'like products' for EPPs
- By 2008 13 lists with 411 HS-6 codes: very little overlap.
 - ▣ Compromise: negotiate on a core list (26 products).
 - ▣ No agreement but over 2002-2008 period, no country has reduced its tariffs more on core-list products more than on other products
 - ▣ Countries usually proposed goods with a $RCA > 1$; but not goods with high-tariffs

Correlates of EGs submissions

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% of goods proposed under the 2008 CTESS program with Revealed Comparative Advantage ($RCA > 1$)(in 2007)



Among the goods submitted by New Zealand (ie the 164 goods of the Friends' list), 60% are goods for which it had a $RCA > 1$ in 2007

Source: Ballineau and de Melo (2011). Probit estimates for a sample of 3800 submitted goods confirm that the probability of submitting a good to the EGS list is higher for goods with an $RCA > 1$ **and lower for goods with a high MFN tariff.**

Conclusions (I)

- Potential CO₂ leakage effects probably exaggerated (for political economy reasons)...but BTAs looming on horizon when we will get serious about climate
- So far no 'mandate effect' at WTO on environment: Countries did not act on articles 28 (fisheries) and 31 (EGS) Doha mandate → lack of cooperation (exacerbated by CBDR+ S&DT)
- Private sector initiatives more promising?

Conclusions (II)

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- Global Policy Making architecture (IMF, World Bank, WTO) needs overhaul to reflect world with stronger physical linkages.
- A regional approach i.e. bottom-up approach) more likely to give results (GATT with leeway more successful than WTO with SU). Environmental directives under Maastricht.
- MFN + NT best compromise to face the threat of carbon tariffs and BTAs. Border tax adjustments have lower discriminatory capacity than contingent protection (developing countries want MFN, developed NT).
- Subsidy rules at the WTO need to be modified.