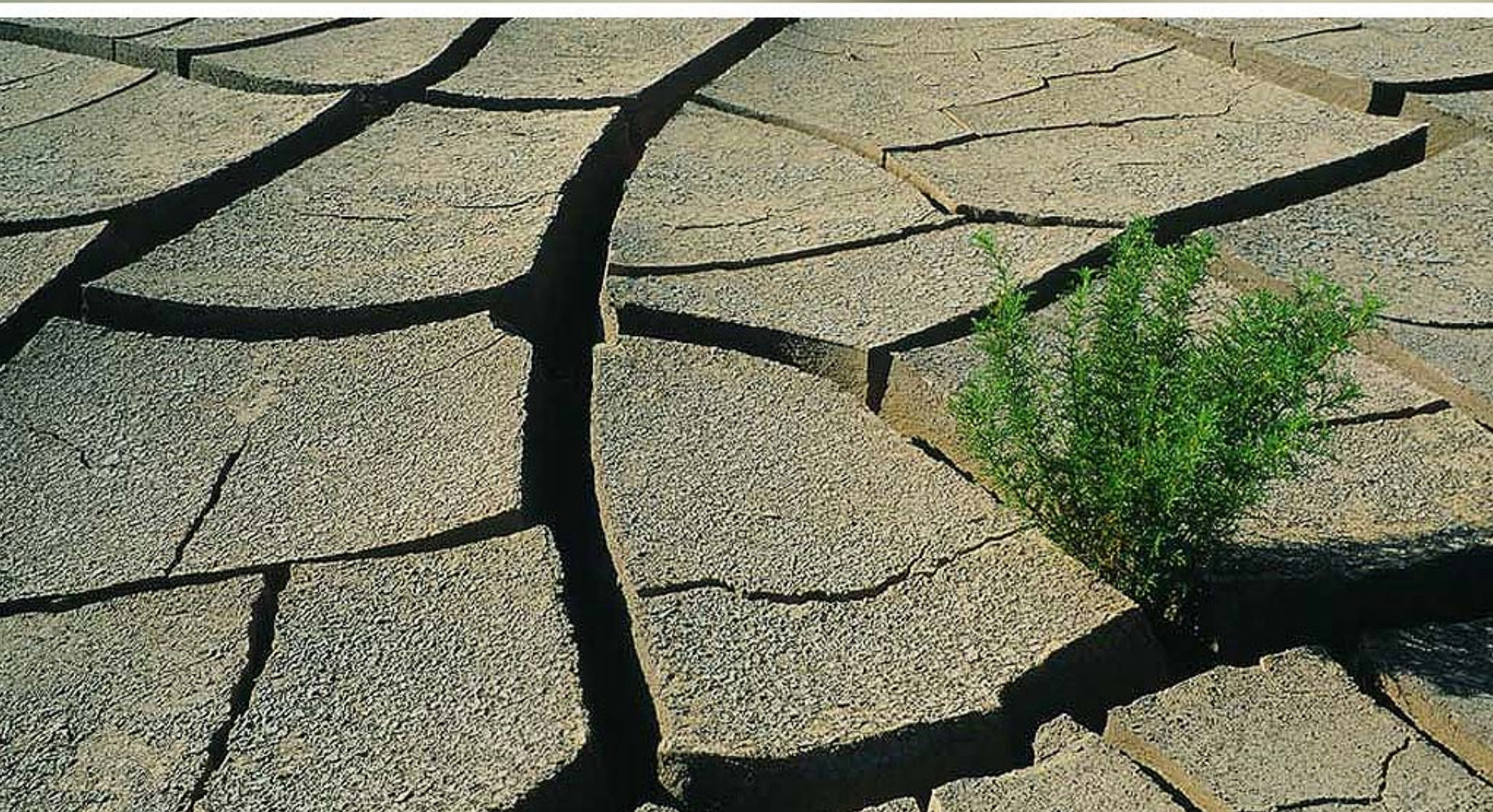


Trade Policy & Climate Change: Using Trade Measures to Address Competitiveness Concerns

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Addressing competitiveness concerns

- Crucial to any post-Kyoto agreement
- Can it be done by using trade measures?
 - **Is it legal?**
 - **What are the economic implications?**
- Proposal for carbon tax on imports from non-signatories of post-Kyoto agreement
 - **French President Chirac, Prime Minister de Villepin, EU Commissioner Verheugen**



Types of trade measures

| | Type of Measure | Examples |
|----|-----------------------------------|---|
| 1. | Quantitative restrictions | Import prohibition or quota on goods |
| 2. | Punitive tariffs | Extra tariff on imported goods |
| 3. | Countervailing duties | Charges on imported goods on basis that lack of GHG emission reduction targets in country of origin is an 'illegal subsidy' |
| 4. | Border tax adjustments on imports | Tax on imported goods that were not similarly taxed in country of origin |
| 5. | Border tax adjustments on exports | Rebate of environmental tax on exports |
| 6. | Regulations & standards | Carbon labelling; fuel efficiency standards |

Legality of trade measures

- Import bans
 - **Would violate GATT quantitative restriction rule**
- Punitive tariffs
 - **Would violate GATT tariff concession rules**
- Countervailing duties
 - **Likely to violate both GATT & SCM Agreement**



Legality of trade measures continued

- **Border tax adjustments:**
 - **Possible under WTO rules**
 - **... but uncertainties where tax is on production inputs or emissions**
- **Regulations:**
 - **Possible but must treat domestic and foreign producers even-handedly**

Economic implications for New Zealand



Modelling Framework

- **Global Trade Analysis Project (GTAP) database**
 - 87 countries/regions
 - 57 products
 - Captures intersectoral linkages within region and economic linkages between regions
- **GTAPinGAMS core static model**
 - Global model incorporating production, factor markets, institutions & trade

Modelling Framework

- **Our aggregation identifies 9 regions and 18 commodities**
 - New Zealand, Australia, the US, Japan, the EU, Other Annex 1, China, South East Asia, rest of World
 - Meat products, dairy products, TCF, chemical products & metal products etc
- **Carbon-related trade restrictions appear in the form of import tariffs**
- **We do not consider the consequences of the next climate change agreement**

Simulation Exercises

Scenarios considered

| | (1) | (2) | (3) | (4) |
|----------------------------|--------------------------|--------------------------|-------------|-------------------|
| Tariffs imposed by: | Annex I (US excluded) | Annex I (US excluded) | Annex I | European Union |
| On imports from: | Non-Annex I and the US | Non-Annex I | Non-Annex I | All other nations |

- **Carbon tariffs/BTAs**

- US\$50 per tonne in simulations (1) – (3)
- US\$25 per tonne in simulation (4)

Simulation Exercises

CO₂ emissions by commodity (tonnes per 2001 US\$100,000)

| | NZL | AUS | US | China | RoW |
|-------------------|------------|------------|-----------|--------------|------------|
| Meat products | 1.5 | 8.3 | 6.1 | 7.9 | 4.5 |
| Dairy products | 5.9 | 15.4 | 5.8 | 17.0 | 7.5 |
| Chemical products | 31.5 | 84.9 | 30.2 | 76.1 | 104.4 |
| Metal products | 66.0 | 57.2 | 17.2 | 84.3 | 55.5 |

Simulation Exercises

Welfare changes relative to GDP

| | (1) | (2) | (3) | (4) |
|-----------------|-------|-------|-------|-------|
| New Zealand | 0.07 | 0.05 | 0.06 | -0.00 |
| Australia | 0.12 | 0.11 | 0.10 | -0.04 |
| US | 0.01 | 0.03 | 0.06 | 0.00 |
| China | -0.28 | -0.27 | -0.37 | -0.03 |
| South East Asia | -0.26 | -0.26 | -0.33 | -0.03 |

Simulation Exercises

- **Simulations (1) – (3)**

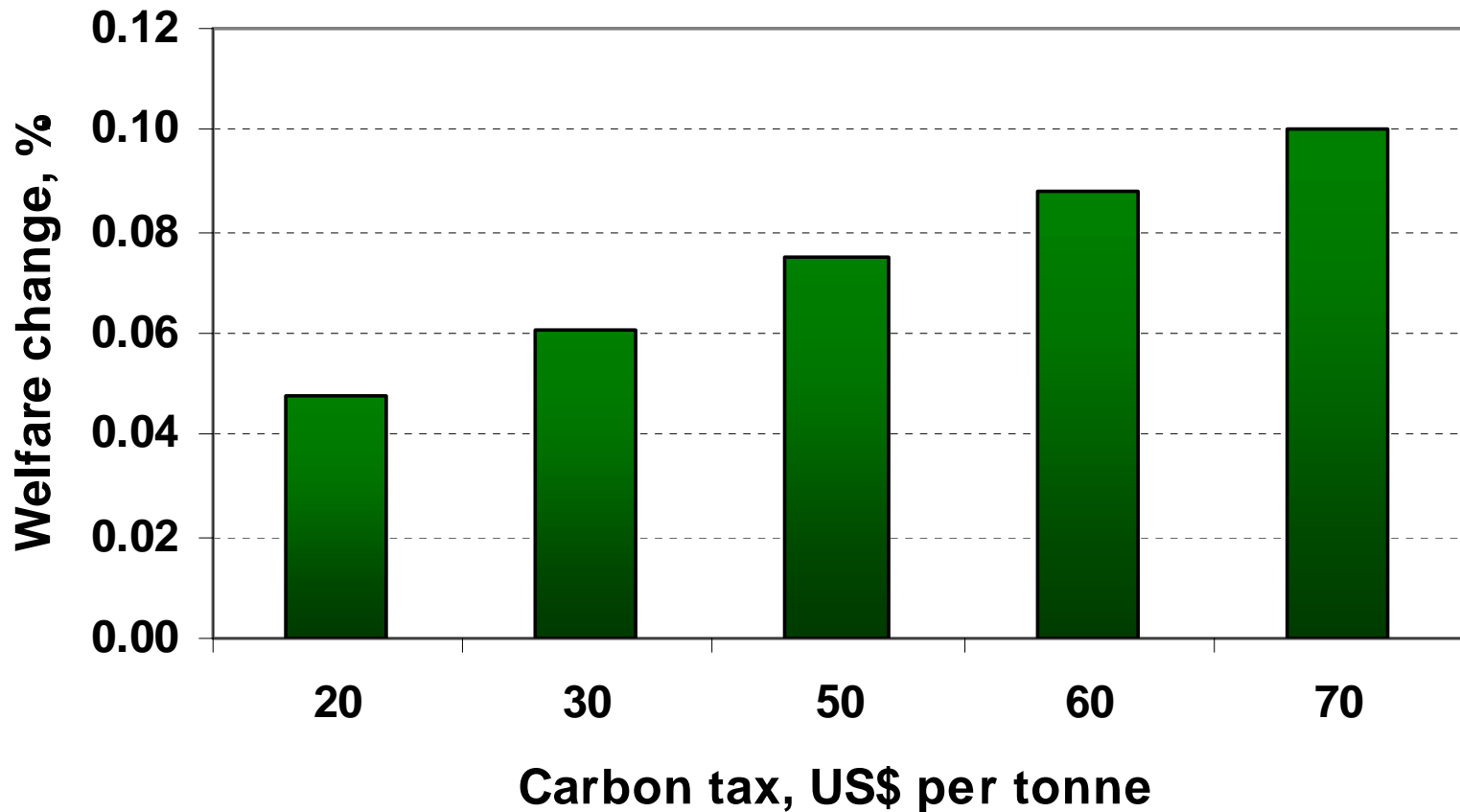
- Exports to included nations increase and exports to excluded nations decrease
- Relative large increases in NZ production and exports of resource-based, chemical and metal products

- **Simulation (4)**

- Relatively large decrease in NZ exports of resources, metal, and other manufacturing products
- NZ exports of dairy and meat exports to the EU increase
- Overall increase in NZ exports to the EU

Sensitivity analysis

Welfare changes for alternative carbon taxes (1)





Conclusion & further research

- Competitiveness concerns exist
- Some trade measures possible under WTO rules
- Potential sectoral impacts of trade measures
- Consider global climate change measures
- Include non-carbon GHGs
- Carbon leakage
- Implications of an aviation fuel tax

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