International Trade
and
Resource Use:
Introduction

M. Scott Taylor
University of Calgary, Canada
National Bureau of Economic Research
What does Trade Theory do?

- What determines the pattern of trade?
- What determines the volume of trade?
- What are the welfare implications of trade and trade policy?
What determines the pattern of trade?

- Comparative Advantage
- Technology
- Endowments
- R&D Prowess

Resource Area:

Nature determines the pattern of trade.
What determines the volume of trade?

- **Competitive Trade Theory**
  
  Determined by gap between share of factor services and share of world income

- **New Trade Theory**
  
  Determined by endowments and market structure assumptions

- **Resource Area**
  
  Very little if any consideration
What are the welfare implications of trade and trade policy?

- Conventional Theory
- Elegant gains from trade proofs
- Large theory of trade policy
- New Trade Theory
- IRS created new productivity gains and losses; variety created new gains from specialization; heterogeneity created gains from natural selection.
Resource Area

- Some of the gains from trade proofs generalize.
- Very little trade policy discussion.
- Welfare comparisons complicated by a dynamic setting, and imperfectly competitive market structures.
Fragmented Literature

- Early Heckscher-Ohlin Literature
- Resource Curse Literature
- Host of Small Open Economy Models in Development
- Property Rights & Trade Literature
The Motivation

- Renewable resource industries employ hundreds of millions of people worldwide and feed billions.

- Renewable resources are some of our most precious assets: forests, fisheries, aquifers, wildlife, soil.

- Several ongoing policy debates require input about likely effects of the effect of trade restrictions, the elimination of subsidies, and the role markets could play in fostering sustainable use of wildlife.
World merchandise exports by product, 1990-08
(Billion dollars)

Source: WTO secretariat estimates.
Natural resources exports by region, 2008
(Billion dollars and percentage)

<table>
<thead>
<tr>
<th>Region</th>
<th>Value</th>
<th>Share in total merchandise exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3855.4</td>
<td>25</td>
</tr>
<tr>
<td>Africa</td>
<td>406.0</td>
<td>73</td>
</tr>
<tr>
<td>Asia</td>
<td>630.4</td>
<td>14</td>
</tr>
<tr>
<td>Commonwealth of Independent States (CIS)</td>
<td>489.7</td>
<td>70</td>
</tr>
<tr>
<td>Europe</td>
<td>891.5</td>
<td>14</td>
</tr>
<tr>
<td>Middle East</td>
<td>758.7</td>
<td>74</td>
</tr>
<tr>
<td>North America</td>
<td>397.8</td>
<td>20</td>
</tr>
<tr>
<td>South and Central America</td>
<td>281.3</td>
<td>47</td>
</tr>
</tbody>
</table>

Source: WTO secretariat estimates.
Why do we need regulation at all?

- For a variety of reasons sole ownership of the resource is not possible.

- Scale of resource is large implying common pool problems. The many harvester problem.

- Scale of the resource is fixed implying extraction today means less tomorrow. The many benefactors problem.
Global Production

Quantity Produced vs. Year
Per Capita Consumption of Seafood

Food Supply Quantity (kg/capita/yr)

Year

Property Rights and Trade Literature

- Resource Overuse Hypothesis
- Regulation is Everything Hypothesis
- Regulation is Rigid Hypothesis
Resource Overuse Hypothesis

- Trade can, and has in some cases, made resource overuse worse.

- These losses can dominate the conventional gains from trade.

- Weak property rights or poor regulation is a necessary but not sufficient condition for losses to occur.
Theory and Evidence


Regulation is Everything Hypothesis

- Less developed countries have poorly regulated resource industries and weak property rights.
- Weak regulation/property rights creates comparative advantage in resource industries.
- Therefore, less developed countries will - via the resource overuse hypothesis - be made worse off by trade.
Theory and Evidence

- Regulation is important but costs reflect more than just entry costs or harvest taxes.

- Better regulation can create productivity gains, lowering costs.

- Better property rights can lead to complimentary investments raising productivity.
Theory and Evidence


Regulation is Rigid Hypothesis

- The success of resource regulation and the degree of protection afforded common pool resources is fixed over time.

- Poor regulation/property rights before liberalization then implies poor regulation post liberalization.

- Then by “regulation is everything” hypothesis, a weak regulation country has a comparative advantage in resource products, and by the “resource overuse” hypothesis will overuse them and lose from a trade liberalization.
Theory and Evidence
