Joint Study Groups’ Seminar

Trade Policy Issues in Mining and Metals

Lisbon, 22 April 2015

Cosimo Beverelli*†

*Economic Research Division, WTO
†GSEM, University of Geneva
1. Natural resources: definition and determination of trade patterns

2. Trade policy instruments in natural resource sectors

3. WTO rules: export restrictions in natural resources
Definition of natural resources

- Natural resources (henceforth, NRs) can be defined as “stocks of materials that exist in the natural environment that are both scarce and economically useful in production or consumption, either in their raw state or after a minimal amount of processing”
Five key features

1. Exhaustibility

2. Uneven distribution across countries

3. Externalities in extraction/consumption

4. Dominance in export/production

5. Price volatility
Renewable and non-renewable NRs

• A renewable NR either increases in quantity or otherwise renews itself over a short (i.e. economically relevant) period of time
  – Example: fisheries and forestry

• A non-renewable NR exists in finite quantities, so every unit consumed today reduces the amount available for future consumption
  – Example: fossil fuels and mineral deposits
How are trade patterns in NRs determined?

• Endowments of immobile and scarce NRs are a source of comparative advantage
  – For instance, coal and mineral abundance leads to net exports of raw materials

• While NR abundance is a necessary condition to export NRs (or goods that use NRs intensively), it is not a sufficient condition

• Variables such as education, infrastructure and institutions (especially the property rights regime) have also been observed to affect sectoral patterns of natural resources trade
  – Only when these other determinants of comparative advantage are in place will a resource-abundant country tend to export NRs
How are trade patterns in NRs determined? (ct’d)

• A similar story hold for exploration activities

  – As of 2000, some $114,000 of sub-soil assets were known to lie beneath the average square kilometre of the OECD. The equivalent figure for Africa was a mere $23,000

  – This large gap between OECD countries and African countries cannot possibly reflect exogenous geological differences...

  – ...it rather reflect endogenous differences, mostly in institutions (hold-up problem) and infrastructure
1. Natural resources: definition and determination of trade patterns

2. Trade policy instruments in natural resource sectors

3. WTO rules: export restrictions in natural resources
Overview

• There is a wide array of policy measures that impact on natural resources trade, including:
  – Export taxes, quotas and prohibitions
  – Applied and bound most-favoured nation (MFN) tariffs
  – Non-tariff measures
  – National consumption taxes and subsidies

• The distinction between trade and domestic policies can be blurred
  – Domestic measures that restrict production (consumption) become de facto trade instruments if almost all production (consumption) is exported (imported)

• In NR sectors, it may be argued that the world is “upside-down”: import restrictions are much less prevalent than export restrictions
Import tariffs

- Tariff protection in the NRs sector is generally lower than for overall merchandise trade
- Tariff protection is lowest in mining and fuels

**Simple average applied tariff rates in natural resource sectors, 2007**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Developed countries</th>
<th>Developing countries and LDCs</th>
<th>All countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishery</td>
<td>2.2</td>
<td>15.1</td>
<td>14.2</td>
</tr>
<tr>
<td>Forestry</td>
<td>0.6</td>
<td>6.5</td>
<td>6.1</td>
</tr>
<tr>
<td>Fuels</td>
<td>0.5</td>
<td>6.2</td>
<td>5.8</td>
</tr>
<tr>
<td>Mining</td>
<td>0.8</td>
<td>6.0</td>
<td>5.7</td>
</tr>
<tr>
<td>All merchandise imports</td>
<td>5.4</td>
<td>10.7</td>
<td>10.3</td>
</tr>
</tbody>
</table>

- Tariff escalation (tariffs rising with the stage of processing) is present in some NR sectors (especially renewable such as forestry) but not in others (e.g., fuels)
- There is some evidence of tariff escalation in mining products:
  - Across all countries, average tariff on raw products is 5.8%, while average tariff on semi-finished products is 11.3%
Export taxes

- There is a higher incidence of export taxes applied by exporting countries to NR sectors relative to other sectors
- 11% of world trade in NRs is covered by export taxes, while just 5% of total world trade is covered by export taxes

**Export taxes on mining products (2009)**

Source: Trade data are from Comtrade, year 2007; information on Export Taxes is derived from TPRs (1995-2009)

Notes: Calculations are based on HS two-digit data. Frequencies are calculated as the ratio of the number of export taxes/(number of HS two-digit sectors*number of countries)
Other export restrictions

• Export restrictions in NRs represent a large share of notified export restrictions – more than 35%

• One consequence of the extensive use of export taxes and other export restrictions in natural resources is the use of FDI as a way to circumvent the measures
  – So-called “export restriction-jumping” FDI
Export restrictions: theoretical rationales

• Achieve terms-of-trade gains

• Production relocation (including as a response to tariff escalation in export markets)

• Support to downstream sectors (closely related to the production relocation motive)

• Export diversification (closely related to the two previous motives)

• Protection of the environment

• Avoidance of resource depletion

• Income stabilization
Export restrictions: stated purpose

Export restrictions on industrial raw materials, by stated purpose

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protecting domestic industries</td>
<td>1,244</td>
<td>38.44</td>
</tr>
<tr>
<td>Addressing the current economic conditions</td>
<td>669</td>
<td>20.67</td>
</tr>
<tr>
<td>Preventing illegal activities</td>
<td>648</td>
<td>20.02</td>
</tr>
<tr>
<td>Conserving exhaustible resources</td>
<td>281</td>
<td>8.68</td>
</tr>
<tr>
<td>Collecting revenues</td>
<td>236</td>
<td>7.29</td>
</tr>
<tr>
<td>Ensuring export</td>
<td>83</td>
<td>2.56</td>
</tr>
<tr>
<td>Protecting the environment</td>
<td>75</td>
<td>2.32</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,236</td>
<td>100</td>
</tr>
<tr>
<td>Without justification</td>
<td>2,268</td>
<td></td>
</tr>
<tr>
<td><strong>Overall total</strong></td>
<td>5,504</td>
<td></td>
</tr>
</tbody>
</table>

*Source:* OECD Inventory of Restrictions on Exports of Raw Materials
Export restrictions: stated purpose (ct’d)

• Most measures for which a purpose is declared are explicitly imposed to protect domestic industries

• Promotion of domestic processing/value added is a more frequently cited justification for regulation of exports of semi-processed commodities than for regulation of exports of unprocessed raw materials (Fliess and Mård, 2012)

• These findings are consistent with:
  – The fact that several resource-rich countries set de-escalating (or degressive) export tax structures
  – The production relocation effort hypothesis (response to tariff escalation in export markets)

• Export taxes are largely uncorrelated with import demand elasticity (terms-of-trade considerations are irrelevant – Beverelli, ongoing research)
1. Natural resources: definition and determination of trade patterns

2. Trade policy instruments in natural resource sectors

3. WTO rules: export restrictions in natural resources
Legal framework for export restrictions

• Two GATT (General Agreement on Tariffs and Trade) Articles are mainly invoked by WTO Members imposing export restrictions: GATT Article XI and GATT Article XX
Legal framework: GATT Article XI

- GATT Article XI prohibits non-tariff import restrictions and bans export restrictions other than duties, taxes or other charges

- XI(2)(a) includes an exception that permits the imposition of export prohibitions or restrictions temporarily “to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party”

- This provision has not been examined in either a GATT or WTO dispute
Legal framework: GATT Article XX

• GATT Article XX contains “General Exceptions” that permit otherwise GATT-inconsistent conduct

• In order for such conduct to be protected by Article XX, a member must show:
  1. First, that the measure at issue is of the type that is covered by one of the sub-paragraphs of Article XX
  2. Secondly, that the measure is applied in a manner that is consistent with the chapeau of Article XX, i.e. in a manner that does not constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade
Legal framework: GATT Article XX (ct’d)

- In NRs, the most relevant provisions are in subparagraphs (b), (g) and (i)

- XX(b) permits the adoption of measures that are necessary to protect human, animal or plant life or health

- XX(g) permits the adoption of measures that are related to the conservation of exhaustible natural resources, provided that such measures are made effective in conjunction with restrictions on domestic production or consumption

- XX(i) permits restrictions on exports of domestic materials that are necessary to ensure essential quantities of such materials to a domestic processing industry during periods when their domestic price is held below the world price as part of a governmental stabilization plan. However, such restrictions “shall not operate to increase the exports of or the protection afforded to such domestic industry [...]”
Two relevant WTO disputes on export restrictions


2. China – Rare Earths (DS431, DS432 and DS433)
China – Raw Materials (DS394, DS395 and DS398)

• Complainants: United States, EU and Mexico

• Respondent: China

• Issue: China’s export restrictions (duties, quotas, minimum export price requirements and export licensing requirements) on various forms of raw materials (bauxite, coke, fluorspar, magnesium, manganese, silicon carbide, silicon metal, yellow phosphorus and zinc)

• The complainants claimed that China’s export restrictions:
  – Created scarcity and caused higher prices of the raw materials in global markets
  – Provided Chinese domestic industry with a significant advantage by way of a sufficient supply, and lower and more stable prices for the raw materials
China – Raw Materials (DS394, DS395 and DS398) (ct’d)

• China defended some export restrictions under GATT Article XX(b) (protection of the health of its citizens)

• The Panel reasoned that China was not able to demonstrate that its export duties and quotas would lead to a reduction of pollution in the short- or long-term and therefore contribute towards improving the health of its people
China – Raw Materials (DS394, DS395 and DS398) (ct’d)

• China defended some export restrictions under GATT Article XX(g) (conservation of exhaustible NRs)

• The Panel reasoned that China was not able to demonstrate that it imposed these restrictions in conjunction with restrictions on domestic production or consumption of the raw materials so as to conserve the raw materials
China – Rare Earths (DS431, DS432 and DS433)

• Complainants: United States, EU and Japan

• Respondent: China

• Issue: China’s export restrictions (duties, quotas and trading rights) on rare earths, tungsten and molybdenum

• The complainants claimed that China’s export restrictions were designed to provide Chinese industries that produce downstream goods with protected access to the subject materials
China – Rare Earths (DS431, DS432 and DS433) (ct’d)

• China defended export duties under GATT Article XX(b) (protection of the health of its citizens)

• The Panel reasoned, *arguendo*, that even if Article XX(b) were available to justify China’s export duties, those duties were not “necessary to protect human, animal, or plant life or health”, as required under Article XX(b)

• Under the circumstances, China’s imposition of the export duties in question was found to be inconsistent with China’s WTO obligations
China – Rare Earths (DS431, DS432 and DS433) (ct’d)

• China defended export quotas and trading rights under GATT Article XX(g) (conservation of exhaustible NRs)

• The Panel found that China’s export quotas were designed to achieve industrial policy goals rather than conservation

• Additionally, the Panel found that the challenged export quotas did not work together with measures restricting domestic Chinese use of rare earths, tungsten, and molybdenum, as required by the second part of Article XX(g)
  – The Panel concluded that the overall effect of the foreign and domestic restrictions was to encourage domestic extraction and secure preferential use of those materials by Chinese manufacturers