Differentiated Products and Evasion of Import Tariffs

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What is tariff evasion?

- Concealment of dutiable imports by private parties (individuals or firms)
- Done on their own or in co-operation with customs officials or criminal organizations
- Includes:
  - Smuggling, underinvoicing, double invoicing, undercounting quantities, misrepresenting the price, misclassification of products, etc.
Why do we care about tariff evasion?

- Many developing and transition countries rely on import tariffs as an important source of revenue
  - Customs and other import duties accounted for
    - 62% of tax revenue in the Maldives
    - 55% in Lesotho
    - 50% in Madagascar
    - 42% in Bangladesh
    - 16% in Tajikistan
    - 10% in Ukraine (2004 figures from the World Bank’s WDI)

- Other undesirable effects of tariff evasion
  - It boosts profitability of corrupt firms at the expense of honest producers/importers
  - It may be an obstacle to WTO accession
  - It may hurt the image of a country as an attractive location for FDI
Some anecdotal evidence

- **Bulgaria**
  - In 2001, British consultancy firm, Crown Agents, was contracted to modernize customs and crack down on tariff evasion
  - Cost of the contract $40 million, return on investment 6000%
  - About 50% of the spot checks uncovered violations

- **Poland**
  - In 2000, the Supreme Board of Inspection (NIK) pointed out that the value of imported goods was “ridiculously low”

- **Russian Federation**
  - “Importers […] have goods undercounted or reclassified into a lower-tariff category”
  - Source: The Economist (2001)
Research questions

- Identify the type of products which are more likely to be subject to tariff evasion
- Identify the channels through which tariff evasion takes place
Data

- Data on Trade Flows and Tariffs at the 6-digit HS level from the United Nations’ COMTRADE database

- Years: 1992-2003

- Examples of 6-digit products
  - HS 190211 Uncooked pasta, not stuffed or otherwise prepared, containing eggs
  - HS 610110 Men’s or boys’ overcoats, car-coats, capes, cloaks, anoraks (including ski-jackets), . . . , of wool or fine animal hair
  - HS 480210 Hand-made paper and paperboard
Ten Eastern European countries

Bulgaria, Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia, Russian Federation, Ukraine

Partner country: Germany
Why focus on Eastern Europe?

- **Weakness of Institutions**
  - 51% of firms in Romania, 45% in Lithuania and 44% in Ukraine believed that there was a need to make ‘additional’ payments when dealing with customs (BEEPS, 1999)

- Trade liberalization gives significant variation in tariff rates across time and products

- All but two countries were preparing for the accession to the EU => exogeneity of tariff reform
Measuring ‘disappearing imports’

- Trade gap = value of exports reported by Germany – value of imports from Germany reported by the importing transition country
  
  - for each importing country, each 6-digit product and each year

- As imports data include the cost of insurance and freight, in the absence of evasion the trade gap should be negative
Higher tariffs => larger trade gap

Table 2: Trade gap by Tariff rate

<table>
<thead>
<tr>
<th>Country</th>
<th>Trade Gap</th>
<th>Tariff below median</th>
<th>Tariff above median</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(2) - (1)</td>
</tr>
<tr>
<td>Bulgaria</td>
<td></td>
<td>0.00</td>
<td>0.23</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1751 products)</td>
<td>(1702 products)</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td></td>
<td>0.09</td>
<td>0.19</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9874 products)</td>
<td>(6313 products)</td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td></td>
<td>-0.03</td>
<td>0.15</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(11663 products)</td>
<td>(11062 products)</td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td></td>
<td>-6.05</td>
<td>-5.82</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(8126 products)</td>
<td>(4996 products)</td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td></td>
<td>-0.12</td>
<td>0.03</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7510 products)</td>
<td>(2774 products)</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td></td>
<td>-0.25</td>
<td>-0.80</td>
<td>-0.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(12888 products)</td>
<td>(4929 products)</td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td></td>
<td>-0.08</td>
<td>0.09</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(6002 products)</td>
<td>(3872 products)</td>
<td></td>
</tr>
<tr>
<td>Russian Federation</td>
<td></td>
<td>-5.60</td>
<td>-5.24</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9815 products)</td>
<td>(6760 products)</td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td></td>
<td>0.14</td>
<td>0.16</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7829 products)</td>
<td>(2717 products)</td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
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<td>-3.16</td>
<td>-2.48</td>
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<tr>
<td></td>
<td></td>
<td>(6996 products)</td>
<td>(4829 products)</td>
<td></td>
</tr>
</tbody>
</table>
Greater evasion at higher tariff levels

- In 8 out of 10 countries there is a positive and statistically significant relationship between the trade gap and tariff level.

- Higher tariffs => more ‘disappearing imports’

- Exceptions: Slovenia, Poland
Responsiveness of trade gap to tariff level vs. perceptions of corruption

BEEPS corruption is defined as the percentage of firms reporting that "additional payments" are made “always,” “usually” or “frequently” when dealing with customs and imports. It is the average value for the 1999 and 2002 wave of the survey.
Is tariff evasion greater in the case of differentiated products?

Rauch (1999)

**Homogeneous goods**: price quoted in organized exchanges/ benchmark price  
e.g. cement, paper, beer

**Differentiated goods**: no reference price due to intrinsic features  
e.g. jackets, skirts
Why focus on differentiated products?

It is more difficult to assess the value of differentiated products due to their intrinsic features and different qualities

⇒ More difficult for honest customs officials to assess the value of imports
⇒ Easier for corrupt customs officials to hide their corrupt behavior
The effect is larger for differentiated products

- A one-percentage-point increase in the tariff rate is associated with a 0.6% increase in evasion in the case of homogenous products and a 2.1% increase in the case of differentiated products.
Channels of tariff evasion

- Misrepresenting the price of imported products
- Undercounting quantities of imported products
- Misclassification of imported products
1. Misrepresenting the Price of imported products

\[ \text{value\_gap}_{cpt} = \ln\left( \frac{\text{Export\_value}_{\text{Germany},cpt}}{\text{Export\_quantity}_{\text{Germany},cpt}} \right) - \ln\left( \frac{\text{Import\_value}_{cpt}}{\text{Import\_quantity}_{cpt}} \right) \]
## Higher value gap in differentiated products

<table>
<thead>
<tr>
<th></th>
<th>Homogeneous (1)</th>
<th>Differentiated (2)</th>
<th>(2) - (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>-0.146</td>
<td>0.417</td>
<td>0.56</td>
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<tr>
<td>Czech Repul</td>
<td>0.021</td>
<td>0.288</td>
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<tr>
<td>Hungary</td>
<td>0.006</td>
<td>0.246</td>
<td>0.24</td>
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<tr>
<td>Latvia</td>
<td>-5.92</td>
<td>-5.803</td>
<td>0.12</td>
</tr>
<tr>
<td>Lithuania</td>
<td>-0.027</td>
<td>0.312</td>
<td>0.34</td>
</tr>
<tr>
<td>Poland</td>
<td>-0.495</td>
<td>-0.329</td>
<td>0.17</td>
</tr>
<tr>
<td>Romania</td>
<td>0.018</td>
<td>0.448</td>
<td>0.43</td>
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<tr>
<td>Russian Fed</td>
<td>-5.524</td>
<td>-5.16</td>
<td>0.36</td>
</tr>
<tr>
<td>Slovenia</td>
<td>-0.146</td>
<td>0.235</td>
<td>0.38</td>
</tr>
<tr>
<td>Ukraine</td>
<td>-2.995</td>
<td>-2.73</td>
<td>0.27</td>
</tr>
</tbody>
</table>
2. Undercounting quantities of imported products

- no evidence of it being more likely for differentiated products
3. Misclassification of imported products
   - no evidence of product misclassification
Conclusions

- Extent of tariff evasion increases with the tariff rate in 8 of 10 transition countries

- Responsiveness of the trade gap to the tariff level is greater for differentiated products

- Greater tariff evasion observed for differentiated products tends to take place through misrepresentation of the import price
Policy implications

- While our study does not explicitly analyze the effects of customs reform, its results suggest that tariff evasion may be diminished by
  - Limiting the discretion of customs officials
  - Audits and secondary inspections
  - Enhancing the ability of customs officials to verify the validity of import documents by computerization and international agreements