A Tariff-Line Approach to Capturing Trade Gains from an FTA: the Case of the Proposed KORUS FTA

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Exporter Shares of Korea's Ag Imports

Source: ERS Korea briefing room
Ten Percent of Ag Lines Have Tariffs > 50%

But they account for 93% of lines with TRQs and 34% of US exports to Korea in 2004-2006
Proposed KORUS Agreement

- 23 staging categories (tariff reduction schedules) for ag imports to Korea
- 16 new US-specific TRQs established, with scheduled increases
- 30 products with special safeguards
- In most cases, tariffs reduced slowly over the implementation period, 2008-2027
- No tariff reductions for rice, or for over-quota rates on certain dairy products
## Proposed TRQs for Korean imports of U.S. products

<table>
<thead>
<tr>
<th>Product</th>
<th>4-digit HS codes</th>
<th>Duration</th>
<th>Rate of growth/year</th>
<th>Initial quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy powders</td>
<td>0402</td>
<td>indefinite</td>
<td>3</td>
<td>5000</td>
</tr>
<tr>
<td>Food whey</td>
<td>0404</td>
<td>9</td>
<td>3</td>
<td>3000</td>
</tr>
<tr>
<td>Butter and dairy fats</td>
<td>0405</td>
<td>9</td>
<td>3</td>
<td>200</td>
</tr>
<tr>
<td>Cheeses, some varieties</td>
<td>0406</td>
<td>14</td>
<td>3</td>
<td>7000</td>
</tr>
<tr>
<td>Honey, natural</td>
<td>0409</td>
<td>indefinite</td>
<td>3</td>
<td>200</td>
</tr>
<tr>
<td>Potatoes, fresh/chilled, not for chipping</td>
<td>0701</td>
<td>indefinite</td>
<td>3</td>
<td>3000</td>
</tr>
<tr>
<td>Oranges</td>
<td>0805</td>
<td>indefinite</td>
<td>3</td>
<td>2500</td>
</tr>
<tr>
<td>Barley, except malting</td>
<td>1003</td>
<td>14</td>
<td>2</td>
<td>2500</td>
</tr>
<tr>
<td>Malt and malting barley</td>
<td>1107, 1003</td>
<td>14</td>
<td>2</td>
<td>9000</td>
</tr>
<tr>
<td>Corn starch</td>
<td>1108</td>
<td>14</td>
<td>3</td>
<td>10000</td>
</tr>
<tr>
<td>Food-use soybeans, identity-preserved</td>
<td>1201</td>
<td>indefinite</td>
<td>3</td>
<td>10000</td>
</tr>
<tr>
<td>Ginseng, raw white</td>
<td>1211</td>
<td>17</td>
<td>About .2 tons/year</td>
<td>5.7</td>
</tr>
<tr>
<td>Fodder, other</td>
<td>1214</td>
<td>14</td>
<td>0</td>
<td>200000</td>
</tr>
<tr>
<td>Dry milk preparations</td>
<td>1901</td>
<td>9</td>
<td>3</td>
<td>700</td>
</tr>
<tr>
<td>Animal feeds, supplementary</td>
<td>2309</td>
<td>11</td>
<td>3</td>
<td>5500</td>
</tr>
<tr>
<td>Dextrins</td>
<td>3505</td>
<td>11</td>
<td>3</td>
<td>14000</td>
</tr>
</tbody>
</table>

Note: Only certain 10-digit lines are included in the TRQs. The 4-digit HS groups represented here also include non-TRQ 10-digit lines.
A Tariff-Line Approach in Trade Analysis

- Avoids biases from aggregating tariff lines.
- Allows better representation of tariff details.
- Allows consideration of TRQs and other product-specific details.
- Allows handing multiple tariff lines per TRQ, and multiple TRQs per tariff line

BUT

- Uses a static, partial-equilibrium model, where the only factor influencing trade for an HS-10 line is the import price, assumed to be directly affected by a tariff reduction.
- No cross-product effects are incorporated.
Analysis of Non-TRQ Lines

Cline Model

$$\Delta MI_{i,j} \approx MI_{i,j} \times \left( \frac{1 + t_1}{1 + t_0} - 1 \right) \times e$$

$MI_{i,j} =$ Import value from supplier i of commodity j (in dollars);

$t_0 =$ Base MFN tariff rate;

$t_1 =$ New MFN tariff rate; and

$e =$ Price elasticity of import demand.

The percentage increase in import value equals the percentage change in the import price caused by the tariff reduction, multiplied by the import demand elasticity.
[in-quota import price] = [world price] + [in-quota tariff]

[over-quota import price] = [world price] + [over-quota tariff]

[total imports] = Min ( [TRQ], [in-quota imports])
+ Max (0, [over-quota imports] – [TRQ])

Total imports equal the imports that would be taken at the in-quota tariff, with a ceiling of the TRQ quantity, plus any imports exceeding the TRQ, that would be taken at the over-quota tariff.
Example 1: Chilled beef

- Pre-existing tariff treatment: simple ad-valorem tariff of 40%
- Competitors: Korea, Canada, Oceania
- KORUS phase-out: 15 years
- Final tariff for US product: 0
- Trade increase for US using Cline approach, at year 15: $21 million
Example 2: Corn for processing

- Pre-existing tariff treatment: WTO TRQ and annual adjustment TRQs; in-quota 2%, over-quota 328%
- Main use is corn sweeteners; competing supplies from South America, China, South Africa
- US would get 0 over-quota tariff after 7 years
- KORUS phase-out: 7 years
- Effectively permits expansion of corn processing industries: unlimited inputs from US
- Trade increase for US using TRQ formulation, at year 7: $41 million
Example 3: Oranges

- Pre-existing tariff treatment: TRQ with 50% in-quota tariff; 50% over-quota tariff
- Competitors: Korean tangerines
- US gets country-specific TRQ, rising 3% per year indefinitely, from a small base
- 0 tariff within US TRQ; 50% over-quota
- Trade increase for US assuming complete use of US TRQ, at year 15: $24 million
Bottom line

- KORUS FTA has not been ratified
- All analyses point to beef and pork as biggest potential US export gains
- Challenges to analysis:
  - Long, uneven phase-in of concessions
    How should economic growth be handled?
  - Need to capture meat/feed tradeoff
  - Cross-price effects
- Strength of this analysis:
  - Captures specific treatment for each tariff line