Exchange Rate Pass-Through, Currency Invoicing and Trade Partners

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Discussion by

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What is the relationship between pass-through to import prices and currency invoicing?

Result 1: Pass through is higher for USD invoiced goods than CAD invoiced goods.

Result 2: For USD invoiced goods, the pass through is higher for goods shipped directly from country of origin than if shipped indirectly through the United States.
Invoicing paper adds to micro studies:

Cross country - Goldberg Tille (2008), Kamps (2006)
Survey data on firms - Friberg and Wilander (2008), Fischer et al. (2007)
Interviews with firms - Ito et al. (2010)

Large number of observations - transactions based:

- Export prices
  Gopinath and Rigibon (2008) US customs data
  Fabling and Sanderson (2013) NZ customs data

- Import prices
  Gopinath et al. (2010) US customs data
  Goldberg and Tille (2013) Canadian customs data
5 dimensions (firm, good, exporter, origin, invoice currency)

HS 61 62 Textiles: differentiated goods under Rauch (1999)
Low productivity good - they are not after issues that concern Berman et al. (2012).

three invoicing options
- producer currency (exporter’s currency).
- local currency (CAD).
- vehicle currency in a third currency (predominantly USD).
Exchange rate of the major textile exporters 2002-2008

Bilateral exchange rates per CAD (indexed at July 2002 = 100)
July 2002 - August 2008
Bilateral exchange rates per CAD (indexed at July 2002 = 100)
July 2002 - January 2013

Graph showing bilateral exchange rates per CAD from July 2002 to January 2013 with indexed values at July 2002 = 100.
In the empirical setup, what is $\bar{\tau}$?

$$\Delta_{\tau}P_{st} = \beta \Delta_{\tau}e_{ct} + \text{other stuff} + \epsilon_{st}$$

If prices adjust every period, currency choice is irrelevant. So finding the smallest $\tau$ is critical for the analysis. Thus, $\tau$ is prices at time of shipment. The analysis treats sea, air, truck, pipeline as the same and has no bearing on the price. Just in time delivery versus slow big bunched delivery are not separated.
Swiss customs data for HS 61 62 Textiles

<table>
<thead>
<tr>
<th>( \tau )</th>
<th>Good</th>
<th>Good, Country Transport</th>
<th>Good, Country Transport, ZIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \tau = 1 )</td>
<td>99.99</td>
<td>99.28</td>
<td>91.17</td>
</tr>
<tr>
<td>( \tau = 3 )</td>
<td>0.00</td>
<td>0.09</td>
<td>0.83</td>
</tr>
<tr>
<td>( \tau = 6 )</td>
<td>0.00</td>
<td>0.03</td>
<td>0.36</td>
</tr>
</tbody>
</table>

- Fast adjustment in the 4 dimensions (i.e., cut origin and export country important)
- Assume maximum 1 shipment per month, otherwise \( \tau < 1 \)
Swiss customs data for HS 28 29 Chemicals

<table>
<thead>
<tr>
<th>$\tau$</th>
<th>Good</th>
<th>Good, Country</th>
<th>Good, Country, Transport</th>
<th>Good, Country, Transport, ZIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\tau = 1$</td>
<td>99.91</td>
<td>96.51</td>
<td>95.08</td>
<td>79.36</td>
</tr>
<tr>
<td>$\tau = 3$</td>
<td>0.01</td>
<td>0.53</td>
<td>0.73</td>
<td>2.68</td>
</tr>
<tr>
<td>$\tau = 6$</td>
<td>0.00</td>
<td>0.16</td>
<td>0.21</td>
<td>0.78</td>
</tr>
</tbody>
</table>

- adjustment is now a bit slower (less frequent shipments):
  \[ \bar{T}_{textiles} < \bar{T}_{chemicals} \]

- The Swiss evidence suggests we are talking about the **short-short run**
Comment #2 Shipment type may be important

ERPT for Swiss textile imports and shipment type

<table>
<thead>
<tr>
<th></th>
<th>all</th>
<th>rail</th>
<th>road</th>
<th>air</th>
<th>post</th>
<th>water</th>
</tr>
</thead>
<tbody>
<tr>
<td>exchange rate change</td>
<td>0.242***</td>
<td>0.278***</td>
<td>0.197***</td>
<td>0.613***</td>
<td>0.425***</td>
<td>0.875*</td>
</tr>
<tr>
<td></td>
<td>(0.039)</td>
<td>(0.080)</td>
<td>(0.040)</td>
<td>(0.072)</td>
<td>(0.096)</td>
<td>(0.414)</td>
</tr>
<tr>
<td>shipment size change</td>
<td>−0.206***</td>
<td>−0.137***</td>
<td>−0.190***</td>
<td>−0.214***</td>
<td>−0.356***</td>
<td>−0.117***</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.002)</td>
<td>(0.0001)</td>
<td>(0.002)</td>
<td>(0.004)</td>
<td>(0.016)</td>
</tr>
<tr>
<td>obs.</td>
<td>305705</td>
<td>25547</td>
<td>269319</td>
<td>14886</td>
<td>41443</td>
<td>1019</td>
</tr>
</tbody>
</table>
Why are textiles going through the United States?

**Infrastructure:** Vancouver largest and most efficient port on the West Coast. Los Angeles Port heavy need of investment, yet garment capital of the West Coast.

**Trade agreements/Geography:** NAFTA and shortest distance.

**Inability to observe quality:** “Made in USA” label - overcome fraud. Is it the same product?

**Logistics firms:** TNT and others are involved in retail inventory for small European shops. Is is still inter-firm versus intra-firm?
Comment #4 Are textiles special?

Figure 1: Number of Product-Destinations Supplied

6-month rolling window

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Comment #4 Temporary FX shocks permanent exists

Figure 2: Product-Destinations Supplied - by Sector

6-month rolling window

Graphs by CLASS

Figure 2: Product-Destinations Supplied - by Sector

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Comment #4 Export participation

- How does currency invoicing fit in with export participation?

- Is export pricing and currency invoicing the same for quitters, switchers, new enterants?

- Could be an issue for the United States, less pertinent for China.