“Pricing to Market in India’s Exports: The of Market Heterogeneity and Product Differentiation”
by Sushanta Mallick and Helena Marques

Discussion by Rudrani Bhattacharya
National Institute of Public Finance and Policy, New Delhi

25 March 2009
Motivation

- Investigate pricing behavior of Indian exporters in selected developed and emerging markets
- Investigate extent of exchange rate and tariff rate pass through into export prices at 4-digit product level
- Identify the factors affecting India’s pricing-to-market behavior
- Conducts single equation estimation in a panel framework taking into account autocorrelation and sector and country specific heterogeneity
Main Findings: response of rupee price exports to 100% change in exchange rate and tariff rate

Table: Response of rupee export prices to exchange rate change: all commodities

<table>
<thead>
<tr>
<th>Country</th>
<th>PTM</th>
<th>ERPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>18%</td>
<td>82%</td>
</tr>
<tr>
<td>Developed</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Emerging</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- PTM does not vary with product type in general
- PTM is 9% in emerging market implying incomplete TRPT. For developed markets tariff rate change does not have significant effects
Categorization of products are based on availability of a reference price level: demands economic interpretation

Categorization of products by market structure: monopoly, oligopoly, monopolistically competitive
Restrictive assumption: exporter does not supply to home market

In a general equilibrium framework with
- Firms supply to both home and foreign markets
- Consumers consuming both home and foreign varieties
- Home producer of a particular variety will optimally choose domestic and export price
- Strategically given foreign producer’s optimally chosen domestic price
- Vice Versa for the foreign producer

home-domestic price, home-export price, home-import price and foreign domestic price and exchange rate movements will be endogenous
Restrictive assumption: exporter does not supply to home market

In a general equilibrium framework with
- Firms supply to both home and foreign markets
- Consumers consuming both home and foreign varieties
- Home producer of a particular variety will optimally choose domestic and export price
- Strategically given foreign producer’s optimally chosen domestic price
- Vice Versa for the foreign producer

home-domestic price, home-export price, home-import price and foreign domestic price and exchange rate movements will be endogenous
Restrictive assumption: exporter does not supply to home market

In a general equilibrium framework with
- Firms supply to both home and foreign markets
- Consumers consuming both home and foreign varieties
- Home producer of a particular variety will optimally choose domestic and export price
- Strategically given foreign producer’s optimally chosen domestic price
- Vice Versa for the foreign producer

Home-domestic price, home-export price, home-import price and foreign domestic price and exchange rate movements will be endogenous
Restrictive assumption: exporter does not supply to home market

In a general equilibrium framework with
- Firms supply to both home and foreign markets
- Consumers consuming both home and foreign varieties
- Home producer of a particular variety will optimally choose domestic and export price
  - Strategically given foreign producer’s optimally chosen domestic price
  - Vice Versa for the foreign producer

Home-domestic price, home-export price, home-import price and foreign domestic price and exchange rate movements will be endogenous
Restrictive assumption: exporter does not supply to home market

In a general equilibrium framework with
- Firms supply to both home and foreign markets
- Consumers consuming both home and foreign varieties
- Home producer of a particular variety will optimally choose domestic and export price
- Strategically given foreign producer’s optimally chosen domestic price
- Vice Versa for the foreign producer

home-domestic price, home-export price, home-import price and foreign domestic price and exchange rate movements will be endogenous
Restrictive assumption: exporter does not supply to home market

In a general equilibrium framework with

- Firms supply to both home and foreign markets
- Consumers consuming both home and foreign varieties
- Home producer of a particular variety will optimally choose domestic and export price
- Strategically given foreign producer’s optimally chosen domestic price
- Vice Versa for the foreign producer

Home-domestic price, home-export price, home-import price and foreign domestic price and exchange rate movements will be endogenous
Restrictive assumption: exporter does not supply to home market

In a general equilibrium framework with
- Firms supply to both home and foreign markets
- Consumers consuming both home and foreign varieties
- Home producer of a particular variety will optimally choose domestic and export price
- Strategically given foreign producer’s optimally chosen domestic price
- Vice Versa for the foreign producer

Home-domestic price, home-export price, home-import price and foreign domestic price and exchange rate movements will be endogenous
Restrictive assumption: exporter does not supply to home market

In a general equilibrium framework with
- Firms supply to both home and foreign markets
- Consumers consuming both home and foreign varieties
- Home producer of a particular variety will optimally choose domestic and export price
- Strategically given foreign producer’s optimally chosen domestic price
- Vice Versa for the foreign producer

home-domestic price, home-export price, home-import price and foreign domestic price and exchange rate movements will be endogenous
Other sources of potential endogeniety

- Price competitiveness in the destination market may depend on unobserved sector/region-specific and time effects
- Again foreign demand depends on price competitiveness factors

Estimation technique: panel VAR (Love, 2001)

- Applies traditional VAR approach, where all variables in the system are modelled as endogenous
- Within a panel data framework, where unobserved individual heterogeneity is allowed
Two measures of export price (Yoshida, 1998)
- Wholesale price determined between exporters and distributors
- Retail price set between distributors and consumers

18% PTM to a 100% exchange rate movement may not imply 82% ERPT to home prices in the destination market

For a correct assessment of export price behavior, exchange rate pass-through to both the measures should be taken into account

Form of relationship between exporters and local distributors matters for the choice of export price measure to analyse extent of pass-through
Comments: Role of relationship between exporters and distributors

- If exporter and local distributor are two independent imperfectly competitive (monopoly/monopolistically competitive) firms with market power
  - Both will optimally set its price where the distributor takes wholesale price set by the exporter as its marginal cost
  - Degree of pass through into destination market’s wholesale and retail prices may vary
- Pass through to both measures of price needs to be analysed
Comments: Role of relationship between exporters and distributors

- If exporter and distributor are vertically integrated (exporter has its own subsidiary or has a contractual relation with foreign distributor)
  - Wholesale price will not be a valid measure to analyse pass-through
  - There exists an internal transfer price between exporter and distributor
  - Exporter optimally sets a single price by maximizing joint profits
- Consumer price will be the valid measure to analyse pass-through
Thank you