

Preparing National Tariff Offers for Economic Partnership Agreements:

A Discussion on Methodology

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Introduction

- EPAs envisaged to be reciprocal trading arrangements covering ‘substantially all areas of trade’;
- Current literature provides significant discussion on the various strategic concerns of most ACP states participating in EPAs:
 - examining choice of negotiation clusters;
 - identifying specific areas for negotiations;
- Extensive discussion on the possible extent and implications of tariff liberalization is only emerging.

Objectives of Current Research

- Examine methodological issues to be considered when countries are preparing national tariff offers
- Examine various ‘criteria for exclusion’:
 - Current MFN tariff structure
 - Tariff revenue sensitivity
 - Sensitivity for domestic industry
 - Assessing high potential growth sectors

Outline of Presentation

- Review of the literature
- Description of the Data
- Methodology
- Some scenarios
- Fiscal implications
- Areas for further research work

Literature Review

- General policy discussions on implications of EPAs (Hinkle and Newfarmer; ECDPM Papers; etc);
- Some country assessment work (Page et al on Zambia; other impact assessment work completed);
- Modeling work on potential welfare impacts: see Keck et al (WTO); Karingi et al (ECA ATPC);
- Fiscal effects of trade liberalization (ATPC #5)
- Preparing national tariff offers – Stevens and Kennan (2005) at IDS;

The Data

- National tariff schedules with MFN rates for 2003;
- Import data for country at HS6 tariff level;
- Actual tariff revenue data (capturing exemptions, etc);
- Enables valuable domestic exercise; compared to utilizing external mirror statistics or COMTRADE, TRAINS etc; and captures c.i.f. versus f.o.b. values;

Methodology

- Compile country X – EU trade and tariff revenue data; at HS-6 level;
- Examine sensitive products as implied by national tariff schedule;
- Identify revenue sensitive products
 - Define an appropriate threshold
- Examine products viewed as sensitive by domestic industry
 - See previous regional negotiation offers;
- Also examine high potential growth sectors;

Which products are to be excluded?

Some Scenarios

- For each selection criteria, rank products using simple labels: High (H), Medium (M), or Low (L);
- Outcome of Article XXIV definition of ‘substantially all trade’ unknown;
 - Percentage of trade?
 - Number of tariff lines?
- We can investigate 2 scenarios:
 - If 80 percent import liberalization is proposed, which products should be excluded?
 - If all tariff lines viewed as sensitive (at least 3-H labels in methodology) what share of HS6 tariff lines should be excluded?

Brief Demo
(see EXCEL files)

Fiscal Implications

- Examine tariff revenue data;
- Focus on ‘non-sensitive’ products;
 - Assume arbitrary tariff phase down period of 25 years;
 - At the end of transition period, these products must all be at zero tariffs, with tariff revenue equal to zero;
 - For the transition period, we will reduce all tariffs gradually by about $1/5^{\text{th}}$ of their initial levels;
 - So an initial tariff of 15 per cent will be progressively lowered to 12, 9, 6, 3 and 0 per cent in years 5, 10, 15, 20 and 25 of tariff phase down;
 - Can propose alternate back-loading scenarios;

A Simple Partial Equilibrium Model

(see Olarreaga [2005])

- Partial Equilibrium Model
 - Modeling is quite straightforward in Excel;
 - Results and trends are transparent for policy makers and domestic stakeholders;
- Essential procedure:
 - Calibrate model (demand and supply functions)
 - Utilize import demand elasticities
 - Apply relevant tariff phase down shocks

Simple Partial Equilibrium Model (contd.)

[from Olarreaga (2005)]

- Unilateral MFN Tariff reduction; assume homogenous goods;
- Assess impact of tariff liberalization on home imports, tariff revenue and welfare:

– CDE import demand:

$$M = \frac{A}{[P_w(1+t)]^\eta}$$

– Calibration of A :

$$A = M [P_w(1+t)]^\eta$$

M = import quantities

P_w = world prices

t = tariffs

η = elasticity of import demand

A = Size, endowment (unknown)

Simple Partial Equilibrium Model (contd.)

[from Olarreaga (2005)]

- Impact on imports:

$$M^I = \frac{A}{[P_w(1+t^I)]^\eta} ; M^F = \frac{A}{[P_w(1+t^F)]^\eta}$$

$$\Delta M = M^F - M^I$$

$$= \frac{A}{[P_w(1+t^F)]^\eta} - \frac{A}{[P_w(1+t^I)]^\eta}$$

t^F = final tariff

t^I = initial tariff

M^F = final imports

M^I = initial imports

ΔM = change in imports

Simple Partial Equilibrium Model (contd.)

[from Olarreaga (2005)]

- **Changes in tariff revenue:**

$$TR^I = t^I P_W M^I$$

$$TR^F = t^F P_W M^F$$

$$\Delta TR = TR^F - TR^I$$

$$= P_w^{1-\eta} A \left[\frac{t^F}{(1+t^F)^\eta} - \frac{t^I}{(1+t^I)^\eta} \right]$$

t^F = final tariff

t^I = initial tariff

M^F = final imports

M^I = initial imports

TR^I = initial tariff revenue

TR^F = final tariff revenue

ΔM = change in imports

ΔTR = change in tariff revenue

Simple Partial Equilibrium Model (contd.)

[from Olarreaga (2005)]

- **Change in welfare:**

- $\Delta W = \Delta TR + \Delta CS$

- $TR = b + c - a - b = c - a$;

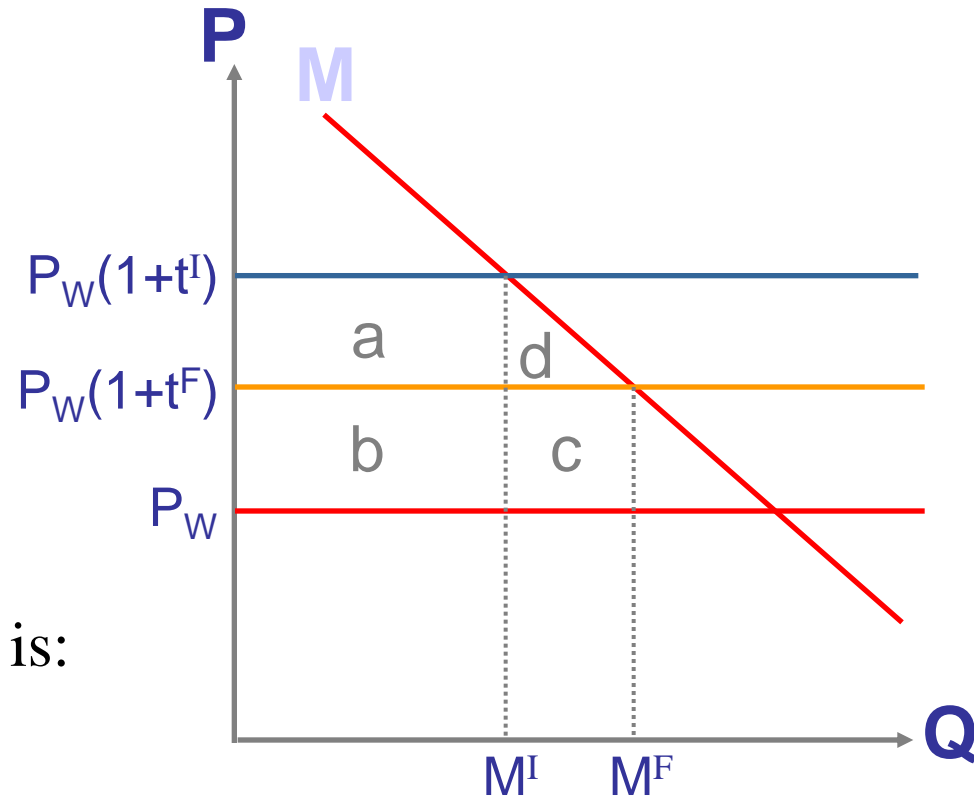
- $\Delta CS = a + d$;

- $\Rightarrow \Delta W = \Delta TR + \Delta CS$
 $= c + d > 0$.

- Linear approximation to ΔW is:

$$\Delta W = c + d$$

$$= \left[\frac{t^F + t^I}{2} \right] P_W [M^F - M^I]$$



ΔW = change in welfare
 ΔCS = change in net consumer surplus

7 Steps' Modeling In Excel

[from Olarreaga (2005)]

1. Collect trade, tariff and elasticity data;
2. Calibrate the model (demand and supply functions);
3. Check that you have calibrated correctly (by reproducing initial imports for example);
4. Give tariff shocks;
5. Recalculate imports (after shock);
6. Calculate tariff revenue, import revenue, welfare, etc...using formulas;
7. Check results. If they don't make sense, modify assumption and start again...

Further Research

- Following national assessments – we can attempt to prepare joint offers for regional communities;
- Particularly for regional-level work formal modeling can assist in preparations;
 - Enables assessment of broader welfare effects, and also estimation of trade diversion;
- Various assessments available based on:
 - WITS-SMART
 - GSIM
 - GTAP

THE END

Any Questions?