

**Modelling of small countries  
in economic integration processes:  
an extension of the Armington approach**  
by  
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### Aim of paper

- Focus on process of 'deep' integration
  - Removal of trade barriers
  - Increased competition because goods become more homogenous due to, for example, harmonization
- Main idea:
  - Changed preference structure for demand in such a way that within the regional integration area products are considered as closer substitutes.
  - Elargement of EU:
    - Reduction in trade barriers
    - Products become closure substitutes in the long run
  - Magnitude of terms of trade excessive in Armington world: especially for small countries
    - Increased Intra-EU competition reduces problem for small EU countries

### Standard GTAP structure

#### New demand structure for EU regions

Exp1: Multilateral trade liberalisation: -tariff/exp sub –50%

Output effects (% change) Coarsegrains

Output effects (% change): Meat

Change Terms of Trade: 1997 million USD

- Observations:
  - The agricultural output and prices decline less in all EU countries.
  - Output effects in all other countries are negative!
  - Welfare impact is higher in EU countries and lower in non-EU countries: this is largely driven by terms of trade effects.
- PUZZLE 1: Why does output increase in all EU countries and decrease for all other countries?
- PUZZLE 2: Quantity (exports/production) effects are smaller and terms of trade effects are larger: Normally, this is a result if one moves to a more imperfect market (substitutability decreases). However, in our case we increased the substitution within the EU market.

Exp1A: Multilateral trade liberalisation: -tariff/exp sub –50%

Exp1B: Multilateral trade liberalisation: -tariff/exp sub –50%

Partial libelarisatation B: Terms of Trade effects

Exp2: EU Enlargement: Removal barriers + “Deep”

Exp2: EU Enlargement: Removal barriers + “Deep”

Deep Integration: Output effects (in %)

Deep Integration: Change welfare, EV (million USD 1997)

Conclusions

- New preference structure represents: 'Deep Integration'
- Enlargement study shows that welfare gains for Eastern European countries of increased competition are much higher than the gains from removing trade barriers
- Values of Armington are crucial for production and welfare results
- We made 'simple' assumptions about values of Armington parameters. Better estimation is crucial for policy analyses