Trade Adjustment Costs and Assistance: The Labour Market Dynamics

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Trade Adjustment Costs and Assistance: The Labour Market Dynamics

- A joint chapter by Joseph Francois, Marion Jansen and Ralf Peters;

- Contribution to

"Trade and Employment:
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Adjustment costs of trade

- To benefit from trade liberalization, economies have to reallocate factors of production from shrinking firms/sectors to flourishing firms/sectors.

- Adjustment costs can take the form of:
  - Unemployment
  - Lower wages during transition
  - Training costs
  - Obsolete machines
  - Transition cost of shifting capital to other activities

Importance of adjustment costs

Concerns about adjustment

- high on policy-makers agenda (e.g. US-TAA; EGAF; WTO "safeguards"; technical assistance in RTAs);

CONTRAST

- Rather low on research agenda (exception: Davidson and Matusz)

Policy-makers' questions:

- Evaluate political and economic consequences of possible temporary drops in GDP or surges in unemployment;

- How to ensure that transition is smooth and benefits from trade are harnessed?

  - How to pre-empt opposition against trade reform?

  - Distributions of adjustment costs appear to be skewed: should those most affected receive support?

GDP loss due to adjustment costs: scenario I
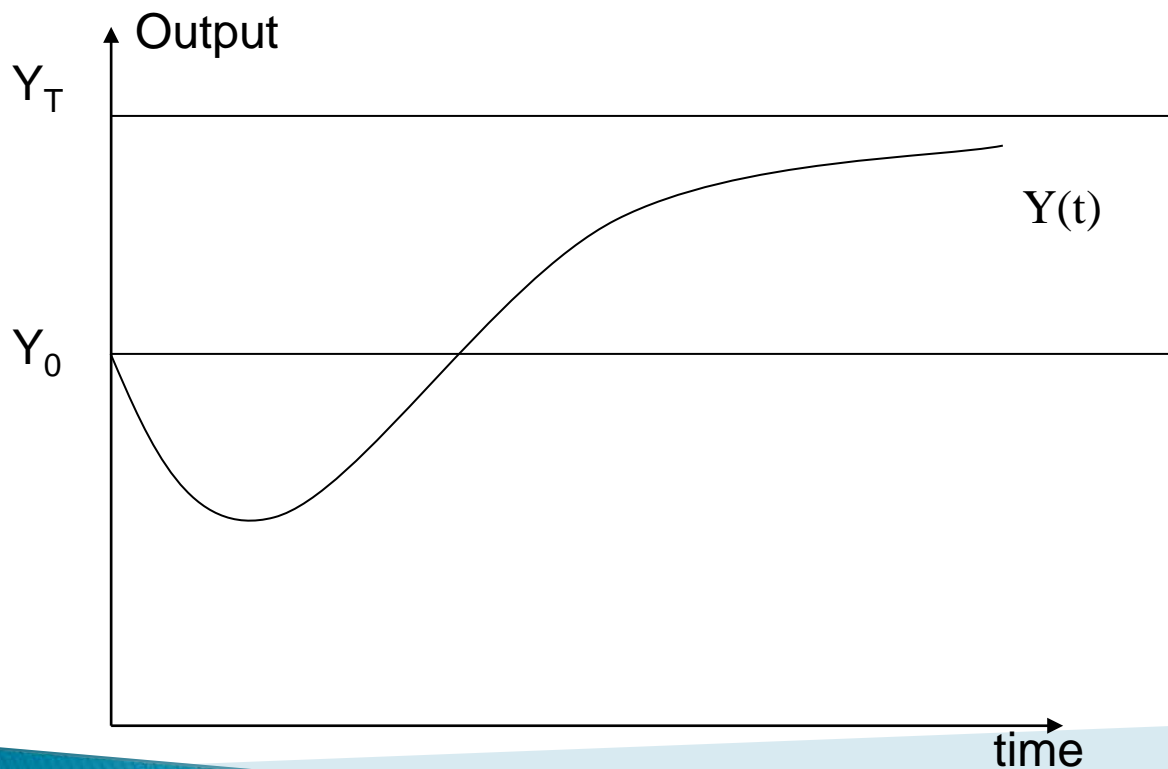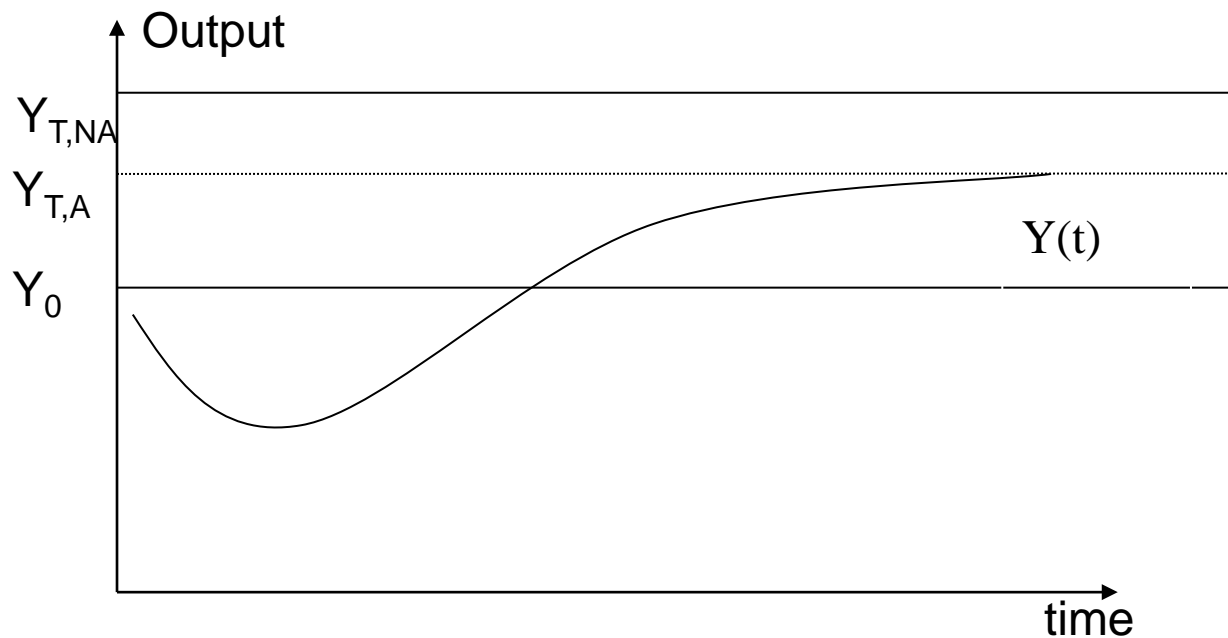

Gross adjustment costs:
Discounted value of difference
between Y_T and the curve $Y(t)$

GDP loss due to adjustment costs: scenario II

Mussa (1978); Davidson and Matusz, 2004)

Gross adjustment costs:
Discounted value of difference between $Y_{T,NA}$ and the curve $Y(t)$:
Costs much larger if optimal equilibrium is never reached

Determinants of adjustment costs

- Financial markets (access to credit);
- Education level of workers and access to training;
- Employment protection policies;
- Access to finance of unemployment (access to credit/savings; unemployment benefit schemes);
- Housing market.

Estimated size of aggregate adjustment costs

- Maggee (1972):   **4%** of total benefits;
- Baldwin et al. (1980):   less than **5%** (bulk of costs carried by labour;
- Takacs and Winters (1991):   **0.5-1.5%**
- De Melo and Tarr (1990):   **1.5%**

- Davidson and Matusz (2000): in economies with sluggish labour markets adjustment costs **may offset** gains;
- Davidson and Matusz (2004): **30-80%**
- Bradford et al. (2005):   **12.5%**

Adjustment costs for workers: Employment losses at aggregate level?

- No effect on industry level employment in Colombia (Attanasio et al., 2004);

- 5 per cent of labour force relocated in Uruguay (de Melo and Roland-Holst, 1994);

- Only in one (Chile !) out of nine countries manufacturing employment decreased after trade liberalization (Papageorgiou et al.,1990);

- Negative effects on employment in Uruguay in 1970s and early 1980s.

- Positive employment growth during and after transition in Costa Rica, Peru and Uruguay; negative findings in three transition economies.

Ex-ante estimate of labour displacement

- Estimates of benefits of trade are often conducted using Computable General Equilibrium models (CGEs);
- Those models typically assume full employment;

- But labour displacement can be estimated in standard set-ups !

Estimating adjustment costs in terms of employment

Example:

Before reform: sector A=> 1000 workers
                  sector B => 3000 workers
After reform: sector A => 3000 workers
                  sector B => 1000 workers

Change in total employment: zero
Number of workers changing sector: 2000

Estimating adjustment costs in terms of employment

Before reform: sector A=>   firm A1: 500 workers
                                            firm A2: 500 workers
                        sector B =>   firm B1: 3000 workers

After reform: sector A =>   firm A1: 3000 workers
                                            firm A2: bankrupt
                        sector B =>   firm B1: 500 workers
                                            firm B2: 500 workers

Change in total employment: zero
Number of workers changing sector: 2000
Number of workers changing firms: 3000
One firm bankrupt; another firm created

Estimating adjustment costs in terms of employment in CGE models

- Variance based measures of firm level change would be most appropriate measure: data don't allow for this;

- **Variance based measure for sectoral change easy to compute in CGE models:**

$$s_{L,across}^2 = \sum_{j=1}^{n} \lambda_j \left(\hat{l}_j - \sum_{j=1}^{n} \lambda_j \hat{l}_j \right)$$

Could become standard element of CGE estimations

Estimated labour displacement following EU–Andean trade liberalization agreement

Country	Static / short term effects				Dynamic / Long term effects			
	Modest liberalisation		Ambitious liberalisation		Modest liberalisation		Ambitious liberalisation	
	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled
EU27	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0
BOLIVIA	1.03	1.5	1.0	1.4	2.1	3.0	2.1	2.9
COLOMBIA	1.3	0.9	0.9	1.3	2.0	1.8	2.0	1.8
ECUADOR	2.2	1.7	1.7	2.2	2.7	2.9	2.7	2.8
PERU	0.7	0.6	0.6	0.7	1.1	1.2	1.1	1.2

Estimated labour displacement effects of EU–Central American FTA

Country	Static / short term effects				Dynamic / Long term effects			
	Comprehensive FTA		Very Comprehensive FTA		Comprehensive FTA		Very Comprehensive FTA	
	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled	Skilled
EU27	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3
COSTA RICA	6.2	6.2	10.6	10.7	6.3	6.3	11.2	11.2
GUATEMALA	2.0	2.0	2.7	2.7	2.1	2.1	2.7	2.7
NICARAGUA	3.6	3.6	5.2	5.2	3.5	3.5	5.1	5.1
PANAMA	15.0	15.0	17.1	17.1	15.2	15.2	17.4	17.4

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Are trade-related unemployed different from other unemployed ?

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- Re-employment probability similar;

- Trade-related unemployed are:
  - Slightly older;
  - Have more tenure;
  - Have slightly higher earnings on the lost jobs

Adjustment problems similar; Long-run income loss more significant for trade-related layoffs

Assisting the economy to adjust

	Labour market and social policies		Trade policies	
		Examples		Examples
Coherent policies to facilitate adjustment	Passive labour market policy	Unemployment insurance	Gradual liberalization	Transition period in trade agreements
	Active labour market policy	Unemployment services, Training	Early announcement	Implementation period after conclusion of agreement
	Social security	Health care		
Specific trade adjustment policies	Extending and targeting labour market policies to trade affected workers	Services in case of mass layoffs	Safeguard measures	GATT Article XIX

Only in specific situations

SSM for agriculture to protect against volatile world market prices and subsidies; sticking point in multilateral negotiations

Conclusions

- ▸ Adjustment costs: often small but potentially large (in particular if long-run equilibrium is affected);

- ▸ Ex-ante evaluations help governments to evaluate costs and design policy measures;

- ▸ Estimates of labour displacement could easily become standard component of CGE simulations;

- ▸ Broadly targeted labour market policies and social protection systems are preferable to targeted trade adjustment assistance.