The Political Economy of Trade Policy

Empirical Approaches

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Political Economy of Trade Policy

- Trade Policy: Historically **Never** Free

- Why are apparently inefficient policies adopted by governments? Rodrik (1995).

Theoretical Literature

Policy-Makers incentives/objectives different from efficiency maximization

Empirical Ambition

To arrive at quantative estimates of the extent to which various factors influence trade policy

Outline

Cross Sectional Studies

- **First Generation**: Investigated correlations between trade policy and a broad set of variables variously conjectured to be relevant for trade policy. Link between econometric specifications and the theory that motivated it often tenuous. Baldwin (1985), Trefler (1993)

- **Second Generation**: Tighter links between econometric specifications and theory. Parsimony. Grossman and Helpman (1994), Gawande and Bandhyopadhyay (2000), Maggi and Goldberg (1999).

Time Series Studies

Magee and Young (1989), Bohara and Kaempfer (1991), Irwin (1998)

Case Studies

- **Historical Studies**

  Irwin and Kroszner (1997), Irwin (1997)

- **Industry Studies, Administered Protection - NTBs**

  Prusa (1992), Hansen and Prusa (1997), Staiger and Wolak (1994, 1996)

- **Trade and FDI**: Joint Determination of Policy

  Feenstra and Branstetter (1999)

- **Free Trade Agreements**

  Gawande et.al (2000), Olarreaga and Sologa (1998)

- **Voting Studies**

First Generation Empirics

Determinants of Trade Policy:

- Adding Machine Model - Caves (1976)

- Interest Group Model - Magee (1979, 1980), Findlay and Wellisz (1982), MBY (1989), Hillman (1982)

- Status Quo Model - Corden (1974)

- Social Change Model

- Foreign Policy Model

Relevant Variables:

Industry Size, Employment, Concentration Ratios, Import Levels, Changes in Level of Imports etc

Empirical Methodology

Examine Correlations between trade policy variables and conjectured determinants

Conclusions, Messages, Criticisms:

- Political Economy matters

- Specifications Ad Hoc

- Testing not possible with fuzzy nulls and alternatives

Time Series Studies

Magee and Young (1989), Bohara and Kaempfer (1991), Irwin (1998)

Second Generation Empirics

Theoretical Literature:

Specification of Endowments, Technology, Preferences and Institutions

Trade policy endogenously determined

Theoretical Branches:

- **Median Voter Theory**

  Mayer(1984)

- **Interest Group Theory**

  Findlay and Wellisz (1982), Bhagwati and Feenstra (1982), Hillman (1982) and Grossman and Helpman (1994)

Median Voter Theory

Mayer (1984)

In unequal socities (with median ownership of capital lower than the mean), trade policies biased in favor of labor. This implies that policies biased against trade in capital rich countries and in favor of trade in capital poor countries.

Also, holding Endowments fixed, an increase in inequality implies an increase in raises barriers in capital abundant countries and lowers them in capital scarce countries.

Test: Mitra and Dutt (2001)

$$TR_i = \alpha_0 + \alpha_1 * INQ + \alpha_2 * INQ * (K/L) + \alpha_3 * (K/L) + \epsilon_i \quad (1)$$

Cross Sectional Implications: Helpman (1997):

$$\frac{t_i}{1+t_i} = (\gamma_i^m - 1)\left(\frac{z_i}{e_i}\right), \quad i = 1, \ldots, n. \quad (2)$$

Testing requires information on γ_i

Interest Group Theories

Tariff Formation Function

Findlay and Wellisz (1982): Two specific factors.

$$\frac{t_i}{1+t_i} = \frac{(1-\alpha_i)(b_i-1)}{\alpha_i b_i + (1-\alpha_i)}\left(\frac{z_i}{e_i}\right), \quad i = 1,\ldots,n. \qquad (3)$$

In (7), α_i is the proportion of the population that own sector-specific inputs in sector i, and b_i is the MRS in the tariff formation function between the level of protectionist lobbying spending and the level of anti-protectionist lobbying spending.

Political Support Function

Hillman (1982)

$$\frac{t_i}{1+t_i} = \frac{1}{a_{pi}}\left(\frac{z_i}{e_i}\right), \quad i = 1,\ldots,n. \qquad (4)$$

where, a_{pi} is the marginal rate of substitution in the government's political support function between aggregate welfare and profits of special interests in sector i.

Political Contributions Approach

Grossman and Helpman (1994)

Government objective function linear in contribution and aggregate welfare:

$$G = C + a * W$$

Lobbying: Menu Auction Framework-Bernheim and Whinston (1986)

$$\frac{t_i}{1 + t_i} = \frac{I_i - \alpha_L}{a + \alpha_L} \left(\frac{z_i}{e_i} \right), \quad i = 1, \ldots, n. \tag{5}$$

- Organized industries receive positive protection

- Unorganized industries receive negative protection

- In equilibrium, tariff rates do not depend upon contribution levels

Conclusions

Political Economy Matters: Correlation between trade policies and theorized determinants

Issues

- Estimates of "a" - Reasonable?

- Contribution Levels and Economic Benefits to Contributing groups - Do they match?

- Degree of "fit"

Data

- NTBs vs Tariffs

- Assignment of Political Organization

    - Included variables: **Overall** Corporate PAC Contributions - Gawande et.al (2000)

    - Excluded: Labor Unions? Foreign Influences? International Negotiations?

Testing Extended Models

Grossman and Helpman (1995): Trade Wars and Trade Talks

Gawande, Krishna and Robbins (2001): Foreign Lobbies and US Trade Policy

Variables that determine organization matter - even after organization is controlled for (in a manner suggested by the theory)

Lobbying

Endogenous Determination of Lobbies and Contribution Levels: Mitra (1999)

Variables that matter:

Fixed Costs of lobby formation (unobservable?)

MBY (1989), Gawande (1998):

Test:

- Free Riding depends upon degree of concentration

- As Free Riding Increases, Lobbying contributions per firm drop

Gawande and Bandhyopadhyay (2000)

Test Lobbying Side of GH: PAC spending varies according to deadweight loss from protection.

Historical Studies

Irwin and Kroszner (1997), Irwin (1997)

Reciprocal Trade Agreements Act Industry vs Class cleavages in Trade Policy

Industry Studies

Administered Protection - NTBs

Prusa (1992), Hansen and Prusa (1997), Staiger and Wolak (1994, 1996): Political Economy of Anti-Dumping

Trade and FDI

Feenstra and Branstetter (1999)

China. Estimates of a.

Free Trade Agreements

Gawande et.al (2000): Test GH Predictions on Industry Exclusions in FTAs Olarreaga and Sologa (1998)

Voting Studies

Magee (2001) Magee and Baldwin (2000) Magee and Beaulieu (2001)

Conclusions

- Political Economy matters!!

- Feedback between theory and empirics

TABLE 5: Grossman-Helpman (1994) Model Estimation with NTB Coverage Ratio Da

| | Gawande-Bandyopadhyay, 2000 | | Goldberg-Maggi, 1999 | |
	Small	Large	Small	Large
z/e	- 3.088**	-5.427*	-.0096**	-.0109**
	(2.02)	(1.96)	(2.33)	(2.42)
I × z/e	3.145**	5.709**	.0106**	.0123**
	(2.00)	(2.47)	(2.00)	(2.22)
Av Tariff on	.780**	.856**		
Intermediates Use	(3.22)	(2.52)		
Av NTB on	.362**	.342**		
Intermediates Use	(5.84)	(4.39)		
Exports/Value Added		-.124**		
		(2.00)		
PAC Spending		0.224*		
per Firm/ VA		(1.20)		
Output per Firm		1.469**		
		(2.57)		
Concentration Ratio		-0.002		
		(0.04)		
Number Employed		.395 *		1.184*
		(1.73)		(1.44)
Unemployment				1.572
				(0.99)
%Unionized		-.060*		
		(1.25)		
#States with		0.762		
Production		(0.37)		
(Past) Growth		.163*		
in Imports		(1.61)		
Change in Tariffs		-.118*		
		(1.11)		
(Past) Growth in		-1.603		
Earnings		(0.19)		

TABLE 5: Grossman-Helpman (1994) Model Estimation with NTB Coverage Ratio Da

	Gawande-Bandyopadhyay, 2000		Goldberg-Maggi, 1999	
	Small	Large	Small	Large
%Unskilled		-.332*		
		(1.43)		
(Past) Growth		0.045		
in Employment		(0.75)		
Payroll/VA		.114*		
		(1.18)		
%Scientists		.395 *		
		(1.47)		
%Managers		-0.129		
		(0.50)		
Real XRate Elasticity		.048**		
of Imports		(2.00)		
Real XRate Elasticity		-0.001		
of Exports		(0.07)		
Cross-Elasticity		- .020**		
of Imports		(2.22)		
Constant	-.042**	Group dummies	-.029**	-0.262
N	242	242	107	107
k	5	26	3	5
R2	0.234	0.346	-	-
AIC	1.369	1.447	-	-
SIC	0.648	0.537	-	-
ln L (log-lik)			-132.06	-130.61

Notes: Original estimates. Absolute t-values in parentheses. AIC=Akaike Information Criterion =
-2(lnL - k)/n. SIC=Schwarz Information Criterion = lnL/n - 0.5 k (ln n/n).
Gawande-Bandyopadhyay (2000) results are estimates from 3-Equation Model with endogenous variables:
{NTB/(1+NTB), PAC Spending/VA, IMPORTs/VA}.
Analysis is at the 4-digit SIC level. Estimates taken from their Tables 3a and 3b.
z=[(Gross Output/Imports)]/10000, e=absolute import elasticity, I = Indicator of political organization,
Goldberg-Maggi (1999) results are ML estimates from a structural model with endogenous variables
{NTB/(1+NTB), z, I} Analysis is at the 3-digit SIC level. Estimates taken from their Table 2.