

The Economics of the World Trading System

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OUTLINE

- The Theory of Trade Agreements
- The History and Design of GATT/WTO
- Interpretation/Evaluation of Key Features
- “New” Trade-Policy Issues
- Conclusion

I. The Theory of Trade Agreements

A. Overview

- **Fundamental Question**

For negotiating governments, what “problem” does a trade agreement solve?

- **Famous Result**

If governments maximize national income and preside over small countries, then unilateral free trade is optimal

- **Discouraging Beginning**

No Rationale for GATT/WTO

- **Constructive Value**

Focus: Political Pref's and/or Large Country.

- **Small-Country Approach**

Small Country, Political preferences

Can Account for Positive Import Tariffs

Still No Problem for a Trade Agt. to Solve

- **Popular Variation**

Trade Agts Mobilize Export Support

Not If Countries Are Small!

- **Traditional Approach**

Large Country, Nat'l Income Maximization

Large Country \iff terms of trade externality

Can Account for Positive Import Tariffs

Problem to Solve: Prisoner's Dilemma

- **Objections**

1. Ignores Political Preferences

2. Relevance? TOT Rarely Mentioned

- **Political-Economic Approach**

Large Country, Political Preferences

Can Account for Positive Import Tariffs

Problem to Solve: Prisoner's Dilemma

- **Response to Objections**

1. Includes Political Preferences

2. Relates TOT and Market Access

- **Answer to Fundamental Question**

Whether or not governments have political preferences, the purpose of a trade agreement is to facilitate the escape from a terms-of-trade driven Prisoner's Dilemma problem.

B. Economic Environment

- **Standard GE Model**

Two Goods: x and y

Two Countries: Home and Foreign (*)

Trade Pattern: Home Imports x and Exports y

Production: Competitive

- **Prices**

Local Prices: $P = P_x/P_y$ and $P^* = P_x^*/P_y^*$

World Price: $P^w = P_x^*/P_y$

Home Terms of Trade: $1/P^w$

Foreign Terms of Trade: P^w

- **Tariffs**

Ad Valorem: t and t^*

Define: $\tau \equiv 1 + t$ and $\tau^* \equiv 1 + t^*$

- **Economic Relationships**

Prices and Tariffs:

$$P(\tau, P^w) \equiv \tau P^w \text{ and } P^*(\tau^*, P^w) \equiv P^w / \tau^*$$

Balanced Trade (Home):

$$P^w M(P(\tau, P^w), P^w) = E(P(\tau, P^w), P^w)$$

Mkt Clearing (y) determines $\tilde{P}^w(\tau, \tau^*)$:

$$E(P(\tau, P^w), P^w) = M^*(P^*(\tau^*, P^w), P^w)$$

No Metzler/Lerner Paradoxes:

$$\frac{\partial \tilde{P}^w}{\partial \tau} < 0 < \frac{\partial \tilde{P}^w}{\partial \tau^*} \text{ and } \frac{dP}{d\tau} > 0 > \frac{dP^*}{d\tau^*}$$

C. Government Welfare Functions

- **General Representation**

$$W(P, \tilde{P}^w) \text{ and } W^*(P^*, \tilde{P}^w)$$

- **Key Assumption**

$$W_{P^w} < 0 \text{ and } W_{P^w}^* > 0$$

- **Unrestricted**

$$W_P \text{ and } W_{P^*}^*$$

- **Includes**

National Income
Political Concerns
Political Constraints

- **Not Included**

Commitment

D. The Purpose of Trade Agreements

- **Unilateral Tariffs**

$$W_P + \lambda W_{P^w} = 0 \implies W_P < 0$$

$$W_{P^*} + \lambda^* W_{P^{*w}} = 0 \implies W_{P^*} > 0$$

- **Politically Optimal Tariffs**

$$W_P = 0 = W_{P^*}$$

- **Results**

R1: *Nash Tariffs are inefficient.*

R2: *Starting from Nash, a trade agreement can offer Pareto gains only if each government reduces its tariff.*

R3: *Politically optimal tariffs are efficient.*

- **Answer to Fundamental Question**

Whether or not governments have political preferences, the purpose of a trade agreement is to facilitate the escape from a terms-of-trade driven Prisoner's Dilemma problem.

- **Terms-of-Trade Externality: Meaning**

Exporters Bear Some Tax Incidence

Legal Scholar Language:

1. Cost Shifting
2. Market Access

- **Evidence**

Studies (Kreinin, Winters-Chang, Bown)

Exchange Rate Shocks: Incomplete Pass Thru

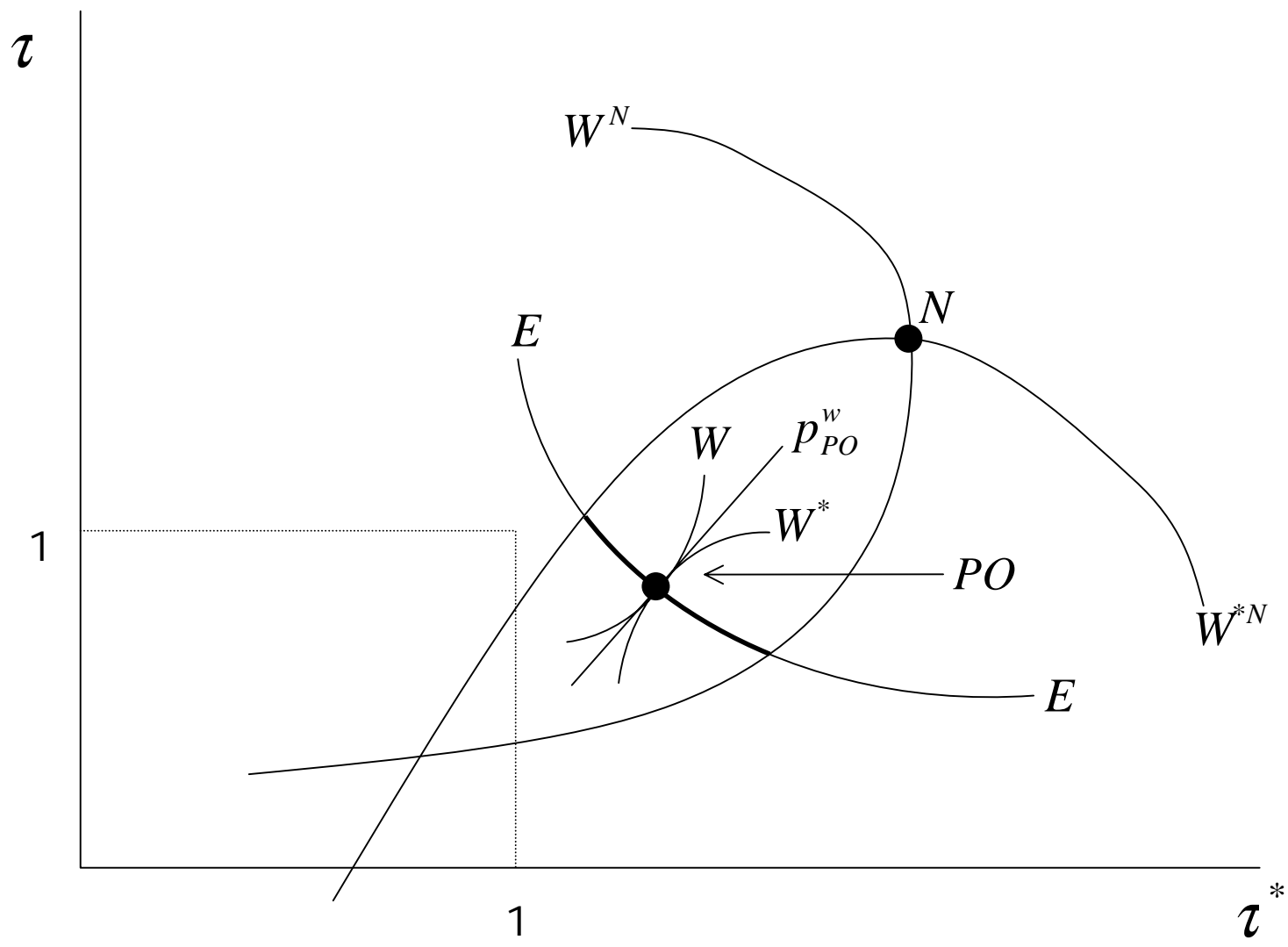


Figure 3

● Evidence: Further Details

Kreinin (1961): US GATT tariff cuts: “less than a third...of the tariff concessions granted by the United States were passed on to the US consumer in the form of reduced import prices, while more than two-thirds...accrued to the foreign suppliers and improved terms of trade of the exporting nations.”

Winters-Chang (1999, 2000): find substantial terms-of-trade effects associated with regional liberalization in Latin America under the Mercosur trade agreement and under Spain’s accession to the EU.

Bown-Crowley (2004): Third-party externalities are ubiquitous. Remedy and dispute activities influenced by retaliatory capacity of partner.

Goldberg-Knetter (1997): survey exchange rate pass through literature. The degree of exchange rate pass through averages at about 60%.

Berry-Levinsohn-Pakes (1999): US imports of Japanese autos. VER policy. Tariff-equivalent policy would have generated a net gain to US national income of \$12.5 billion. Only difference is world prices.

- **Game Theory**

Prisoner's Dilemma Structure

Cooperative Solution: Reciprocal reduction in tariffs enforced by the threat of retaliation

- **Game/Institutional Theory**

How to do this? Was not spontaneous.

Are the GATT/WTO rules well designed?

Opportunity to study institution designed to solve complex Prisoner's Dilemma problem.

II. The History and Design of GATT/WTO

A. History

- **Early Failure**

- **RTA of 1934**

High Tariffs/Bad Performance: 1920s, 1930s
Hull: Joins Reciprocity and MFN in RTA

- **ITO and GATT**

GATT 1947 an interim agreement
ITO never ratified by US

- **GATT: 8 Rounds, 50+ years**

Tariffs (40% to 4%)
Membership (23 to over 140)

- **Uruguay Round and the WTO**

New Issues
Unified Dispute Settlement Procedures
ITO-like Charter

B. Design

- **Preamble**

Reciprocal, Mutually Advant. Tariff Cuts
Non-Discriminatory Treatment

- **Substantive Obligations**

Tariff Bindings
MFN Treatment

- **Exceptions**

Original Actions:

- Renegotiation
- Safeguards
- Preferential Trading Agts

Retaliatory Actions:

- Compensation, or
- W/drawal of Subst. Equiv. Concession

- **Dispute Settlement Procedures**

Nullification or Impairment
Authorized retaliation (last resort, violation)

C. Reciprocity, MFN and Enforcement

- **Reciprocity**

Norms (“balance of concessions”)

Rules (w/drawal of subst. equiv. concessions)

- **MFN**

Pervasive

- **Enforcement**

Retaliation and Exceptions

Retaliation as discipline

Equilibrium path? Efficient Breach?

Authorized Retaliation

Motivates negotiated compensation

Equilibrium path? Efficient Breach?

Unauthorized Retaliation

Balance of Terror

Off-the-equilibrium path?

III. Interpretation and Evaluation of Key Features: Reciprocity, MFN and Enforcement

A. Reciprocity

- **Fundamental Question**

Does reciprocity make economic sense?

- **The Meaning of Reciprocity**

Mutual changes in trade policy: for each partner an equal change in the value of its imports and exports.

- **A Formal Definition**

$$\tilde{P}^{wo}[M(1) - M(0)] = [E(1) - E(0)]$$

- **Using Trade Balance and Mkt Clearing**

$$[\tilde{P}^{w1} - \tilde{P}^{wo}]M(1) = 0$$

- **Implications**

Reciprocity Fixes the World Price

Reciprocity “Neutralizes” the Problem

- **Reciprocity and Trade Negotiations**

Govt's seek a balance of concessions (norm)

R4: *Beginning at the Nash tariffs, trade liberalization that satisfies reciprocity raises each government's welfare, at least initially.*

- **Interpretation**

Nash tariffs leave all governments wanting more trade volume at the fixed world price

Unilateral liberalization unattractive, due to implied terms of trade loss

Reciprocal liberalization fixes the world price and thus leads to mutual gains

- **Reciprocity without Apology**

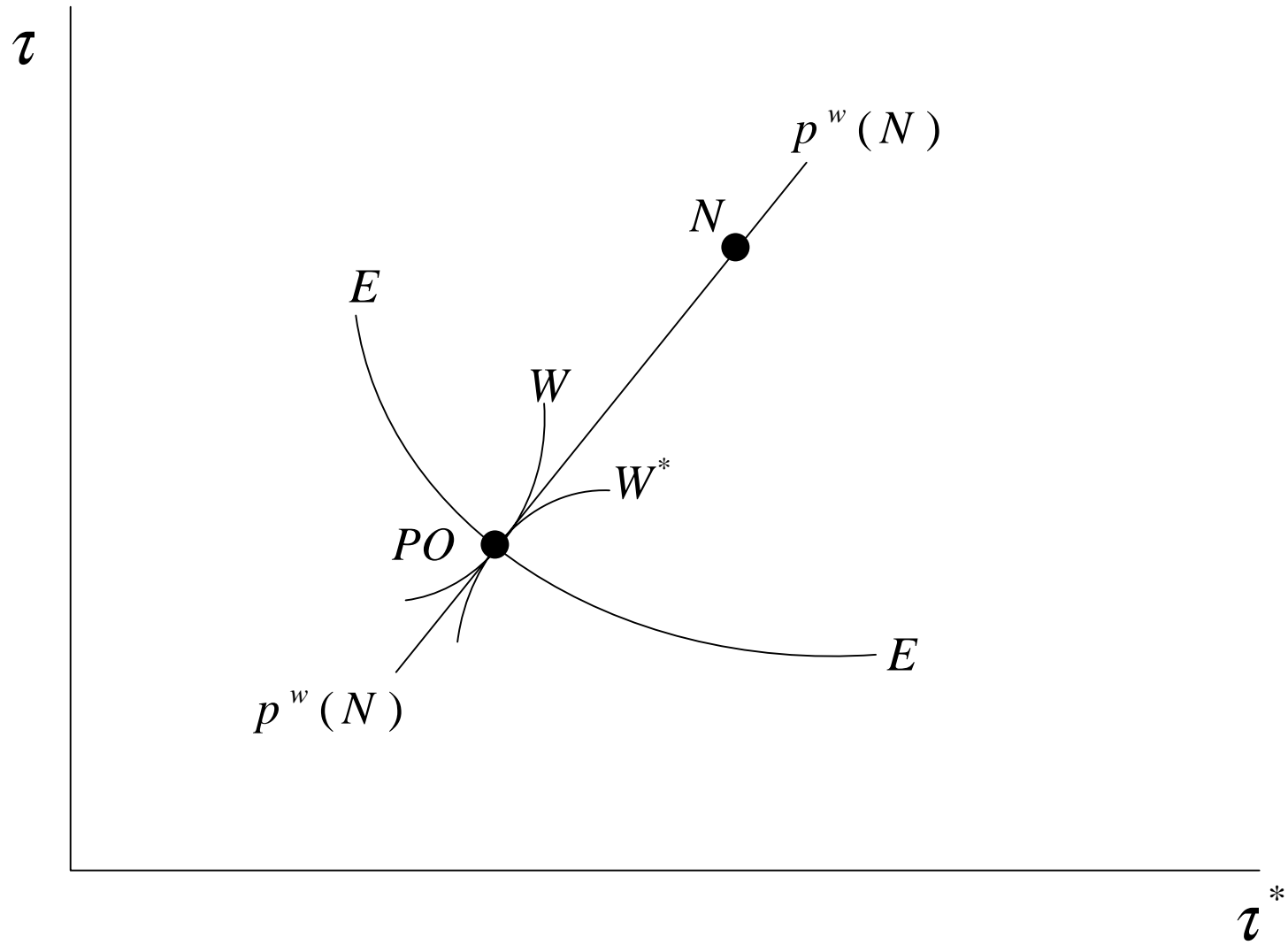


Figure 5a

- **Reciprocity and Renegotiation**

GATT Article XXVIII:

When a government increases a bound tariff, its trading partners are permitted to withdraw *substantially equivalent concessions* of their own.

Question:

Which (if any) efficient tariff pair is robust to renegotiation as allowed under reciprocity?

Answer:

R5: *An efficient tariff pair can be implemented under reciprocity iff it is characterized by tariffs that are set at their politically optimal levels.*

Answer to Fundamental Question:

Reciprocity neutralizes the “problem” by fixing the terms of trade. It thereby promotes efficiency and makes good economic sense.

B. MFN

- **Fundamental Question**

Does MFN make economic sense?

- **The Economic Environment**

Multiple foreign countries, two goods

- **World Prices**

Linkage: $P = \tau^j P^{wj} = \tau^k P^{wk}$

MFN: $\tau^j = \tau^k \implies$ single world price, P^w

- **Externalities**

MFN: World Price (as before)

Non-MFN: Local Prices, too

- **Politically Optimal Tariffs**

MFN and Non-MFN

- **Efficiency Defense: MFN + Reciprocity**

R6: *Politically Optimal tariffs are efficient iff they conform to MFN.*

Removing terms-of-trade motivation works well if this is the *only* externality

Reciprocity works well if we also have MFN

- **Bargaining Game Application**

R7: *An efficient multilateral trade agreement can be implemented under reciprocity iff the tariffs satisfy MFN and are politically optimal.*

R8: *An efficient multilateral trade agreement generally cannot be implemented under reciprocity in the presence of PTA's.*

- **Bilateral Opportunism Application**

Setting

Fix initial tariffs (efficient or not)

Home then negotiates with *1

Do rules protect non-participant (*2) welfare?

Bilateral Opportunism

MFN is not sufficient.

***R9:** A bilateral negotiation that satisfies reciprocity and MFN has no effect on non-participant welfare.*

Idea:

Reciprocity fixes single (MFN) world price and thus non-participant welfare

Policy Implications

1st line of defense against bilateral opp.

No free-rider cost to MFN!

Answer to Fundamental Question:

MFN ensures that the terms-of-trade externality is the only externality, so that reciprocity can be effective and non-opportunistic.

C. Enforcement

- **Fundamental Question**

Does enforcement perspective offer insights?

- **GATT/WTO: Self-Enforcing Agreement**

No GATT/WTO Police

Self-enforce with retaliation

Measured retaliation used to discipline exceptions

Broader fear of breakdown (balance of terror)

Codification of supergame strategies

- **Results Using Enforcement Perspective**

R10: *Enforcement Perspective delivers a number of predictions consistent with GATT/WTO practice and experience:*

1. *Gradualism (Deveraux)*
2. *Escape Clauses/Safeguards*
3. *Exchange of Enforcement Power (Maggi)*
4. *PTA's and Transitions*
5. *PTA's and Discriminatory Cooperation*

- **Answer to Fundamental Question:**

The enforcement perspective delivers new insights

IV. “New” Trade-Policy Issues

A. Agricultural Export Subsidies

- Why Subsidize?

Political Redistribution

Strategic Trade (competitive mkts)

- Why Limit Export Subsidies?

Eliminate subsidy war

Consumers lose

Result 11: *The agreement to limit agricultural export subsidies may represent a victory for exporting governments that comes at the expense of importing governments - and world - welfare.*

See also Panagariya (FT)

B. Preferential Trading Agreements

- Works poorly with reciprocity
- Enforcement: Ambiguous implications
- Growth of PTA's worrisome for WTO approach (Bhagwati)

Result 12: *There is only mixed support for GATT/WTO rules (GATT Article XXIV) regarding PTA's.*

C. Labor and Environmental Standards

- Focus: Pecuniary externalities

- Negotiate Tariffs, Sovereign Standards?

Efficient policy mix, but inefficient mkt access

- Negot. Mkt Access, Sovereign Policy Mix?

Can achieve efficiency

Result 13: *GATT/WTO's existing market access emphasis can, in principle and with some strengthening, deliver efficient selections of tariffs and domestic standards.*

- Larger role for non-violation complaints

D. Dispute Settlement Procedures and Developing Countries

- **Retaliation by small countries**

Not attractive

- **Monetary transfer alternative**

Enforcement?

- **Mexican Proposal**

Tradable Retaliation Rights

Result 14: *An auction of retaliation rights, in which the defendant participates, can make monetary transfers (from a large country to a developing country) credible.*

V. Conclusion

- **The Design of International Institutions**

Guiding Principle: A problem occurs insofar as one member's policies imparts an externality on the welfare of another member. Find rules that undo the associated inefficiencies and that otherwise grant maximal freedom (sovereignty) to members.

- **GATT/WTO very tractable**

Whatever gov't preferences, the externality is:
terms of trade \iff market access

- **Lessons Learned**

Reciprocity and MFN are well-designed rules
Enforcement perspective adds insight
Can evaluate new trade-policy issues