Multilateral Trade Negotiations, Bilateral Opportunism and the Rules of GATT

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Last Revised: March 2000


1. Introduction

–GATT is a continuous negotiating forum.

  –Bilateral exchange of market access.

  –Secured by tariff bindings.

  –Multilateralized by MFN.

–On-going negotiations might lead to bilateral opportunism.

  –Concession erosion.

–Is this a general problem for an international trade institution?

–Can GATT rules alleviate the problem?
--Practical relevance of these questions.

--Central to the interpretation of the role of MFN.

“More important, the MFN obligation protects the value of concessions against future erosion through discrimination. If country A receives a concession from country B and is not entitled to MFN treatment from B, then the value of the concession can be undermined if country B later makes an even better concession to country C on the same goods (or close substitutes). Faced with this uncertainty, country A would offer less for the concession in the first place (as would country B for the reciprocal concession), and fewer valuable deals would be struck.” (Schwartz and Sykes, 1997, p. 62)

--Central issue in GATT/WTO Dispute Panels.

--Violation complaints: Bananas.

--Non-violation complaints: Chips.
–Framework.

–Three country general equilibrium trade model.

–General government objectives.

–Approach.

–Focus on the role of:

–MFN;
–Reciprocity;
–Non-violation “nullification and impairment.”

–First ask: Can these rules *preserve* the welfare of non-participating governments?

–If so, the potential for opportunist bilateral agreements is surely eliminated.

–Second ask: Are these rules really necessary?

–With weaker, or even no, rules governing bilateral negotiations, would efficient trade agreements be vulnerable to bilateral opportunism?
–Findings.

–3rd-country welfare preservation.

–Kemp-Wan rule: fix 3rd-country terms of trade. Yes.

–Market access preservation rule: fix 3rd-country market access. Yes.

–Nullification and impairment rule: no erosion of 3rd-country market access. No.

–Reciprocity and non-discrimination: Yes.

  –Reciprocity fixes terms of trade between participants.

  –MFN multilateralizes fixed terms of trade to 3rd country as well.
–Are these rules really necessary?

–Starting from an efficient trade agreement, and absent these rules, could 3rd-country loss be the basis for bilateral negotiations that benefit both participants?

–Absent these rules, every efficient trade agreement is vulnerable to bilateral opportunism.

–Problem of bilateral opportunism is pervasive.

–Starting from an efficient trade agreement, any bilateral agreement attractive to both parties violates the nullification and impairment rule.

–Nullification and impairment rule solves the bilateral opportunism problem.

–Starting from an efficient trade agreement, MFN does not preclude bilateral agreements that are attractive to both parties.

–MFN alone does not solve the bilateral opportunism problem.

–Conclusion:

–First line of defense: MFN and reciprocity.
–Second line of defense: Nullification and impairment.
2. The Model

–Two-good general equilibrium model of trade between three countries. Government objectives that allow for both economic and political economy considerations.

2.1 The Economic Environment

–Local prices: \( p \equiv p_x/p_y \); \( p^*_i \equiv p^*_x/p^*_y \) for \( i = 1, 2 \).

–World prices: \( p^{wi} \equiv p^*_x/p_y \) for \( i = 1, 2 \).

–Linked across bilateral relationships:

\[
p^{wi} = \left[\tau^i/\tau^j\right]p^{wj} \equiv p^{wi}(\tau^i, \tau^j, p^{wj}).
\]

–Market access that the domestic country affords to foreign country \( j \) at world price \( p^{wj} \): \( MA^j_x(\tau, p^{wj}) \).

–“Residual” import demand faced by exporters from foreign country \( j \) at \( \tau \) and \( p^{wj} \).

–Market access that foreign country \( j \) affords to exporters from the domestic country at world price \( p^{wj} \): \( MA^*_y(\tau^*_j, p^{wj}) \).

–Foreign country \( j \)’s import demand at \( p^{wj} \) and \( \tau^*_j \).

–Market clearing:

\[
MA^j_x(\tau, p^{wj}) = E^*_x(p^*_j(\tau^*_j, p^{wj}), p^{wj}) \quad (2.6)
\]
2.2 Prices, Tariffs and Market Access

– Discriminatory environment.

– Assumptions:

- \( \tilde{p}^{w1}(\tau^1, \tau^2, \tau^1 \tau^2) \) is increasing in \( \tau^2 \), \( \tau^1 \) and \( \tau^2 \), and decreasing in \( \tau^1 \).

- \( \tilde{p}^{w2}(\tau^1, \tau^2, \tau^1 \tau^2) \) is increasing in \( \tau^1 \), \( \tau^1 \) and \( \tau^2 \), and decreasing in \( \tau^2 \).


– MFN environment (\( \tau = \tau^1 = \tau^2 \)).

– Assumptions:

- \( \tilde{p}^w(\tau, \tau^1 \tau^2) \) is increasing in \( \tau^1 \) and \( \tau^2 \), and decreasing in \( \tau \).


2.3 Government Preferences

– \( W(p, T) \); \( W_T(p, T) < 0 \).

– \( W^*(i, p^*, \tilde{p}^w) \); \( W_{p^w}(p^*, i, \tilde{p}^w) > 0 \); Figure 1.
Figure 1
3. Welfare Preservation

–Consider bilateral negotiations between the governments of the home country and foreign country $i$ over $(\tau^i, \tau^j)$ and $\tau^*$. 

3.1 Terms of Trade

**Proposition 1 (Welfare Preservation: Terms of Trade):** Any bilateral agreement between the governments of the home country and foreign country $i$ that leaves unaltered foreign country $j$'s terms of trade also preserves the welfare of the government of foreign country $j$.

\[ W^j(p^j(\tau^*j, \tilde{p}^wj), \tilde{p}^wj). \]

–Kemp-Wan.

3.2 Market Access

–Start at $\tau_I=(\tau^1_I, \tau^2_I, \tau^*_1, \tau^*_2)$. 

–Negotiate to $\tau_N=(\tau^1_N, \tau^2_N, \tau^*_1, \tau^*_2)$ where $\tau^*_1 = \tau^*_N$. 

–Let $\tilde{p}^wj$ ( $\tilde{p}^wj$ ) be the equilibrium $p^wj$ under $\tau_I$ ( $\tau_N$ ). 

–**Market Access Preservation Rule:**

\[ MA^j_x(\tau_N, \tilde{p}^wj) = MA^j_x(\tau_I, \tilde{p}^wj). \] (3.1)
Proposition 2 (Welfare Preservation: Market Access): Any bilateral agreement between the governments of the home country and foreign country i that leaves unaltered foreign country j's market access equivalently leaves unaltered foreign country j's terms of trade and therefore preserves the welfare of the government of foreign country j.

Proof:

–If \( \tilde{p}_N^{wj} = \tilde{p}_I^{wj} \), then market clearing (2.6) at \( \tau_I \) and \( \tau_N \) implies

\[
MA_x^j(\tau_N, \tilde{p}_N^{wj}) = MA_x^j(\tau_N, \tilde{p}_I^{wj}) = E_x^j(p^*(\tau_N, \tilde{p}_N^I, \tilde{p}_N^I)) = E_x^j(p^*(\tau_N, \tilde{p}_I^I, \tilde{p}_I^I)) = MA_x^j(\tau_I, \tilde{p}_I^{wj}).
\]

–If (3.1) is satisfied, then market clearing (2.6) at \( \tau_I \) implies

\[
MA_x^j(\tau_N, \tilde{p}_N^{wj}) = MA_x^j(\tau_I, \tilde{p}_I^{wj}) = E_x^j(p^*(\tau_I, \tilde{p}_I^I, \tilde{p}_I^I)) = E_x^j(p^*(\tau_I, \tilde{p}_I^I, \tilde{p}_I^I)).
\]

–Secure market access relationships are the key to protecting non-participant welfare.

–But market access preservation rule is cumbersome.

–No exact counterpart in GATT.
GATT’s nullification and impairment rule is close:

\[ MA^j_x(\tau_{N^*} \tilde{p}_{I^j}^w) \geq MA^j_x(\tau_I, \tilde{p}_{I^j}^w). \]  \hspace{1cm} (3.2)

But this rule is not sufficient to preserve non-participant welfare.

3.3 Reciprocity and MFN

Reciprocity. Countries exchange equal amounts of market access measured at \( \tilde{p}_{I^i}^w \):

\[ [MA^*y_i(\tau_{N^*} \tilde{p}_{I^i}^w) - MA^*y_i(\tau_I, \tilde{p}_{I^i}^w)] = \tilde{p}_{I^i}^w [MA^x_i(\tau_{N^*}, \tilde{p}_{I^i}^w) - MA^x_i(\tau_I, \tilde{p}_{I^i}^w)]. \]

Use market clearing and trade balance at \( \tau_I \) to simplify:

\[ MA^*y_i(\tau_{N^*} \tilde{p}_{I^i}^w) = \tilde{p}_{I^i}^w \times MA^x_i(\tau_{N^*}, \tilde{p}_{I^i}^w). \]  \hspace{1cm} (3.4)

Note that trade balance at \( \tau_{N^*}^i \) and \( \tilde{p}_{I^i}^w \) can be written as:

\[ MA^*y_i(\tau_{N^*} \tilde{p}_{I^i}^w) = \tilde{p}_{I^i}^w \times E_{x}^*i(p^*i(\tau_{N^*} \tilde{p}_{I^i}^w), \tilde{p}_{I^i}^w). \]  \hspace{1cm} (3.5)

Observe that (3.4) and (3.5) imply

\[ MA^x_i(\tau_{N^*}, \tilde{p}_{I^i}^w) = E_{x}^*i(p^*i(\tau_{N^*} \tilde{p}_{I^i}^w), \tilde{p}_{I^i}^w). \]

Therefore, reciprocity implies \( \tilde{p}_{N^*}^w = \tilde{p}_{I^i}^w \), not \( \tilde{p}_{N^*}^w = \tilde{p}_{I^j}^w \) as would be required for welfare preservation.
–MFN implies \( \tilde{p}_w^i = \tilde{p}_w^j = \tilde{p}_w \), not \( \tilde{p}_N^w = \tilde{p}_I^w \) as would be required for welfare preservation.

–But together, reciprocity and MFN imply \( \tilde{p}_N^w = \tilde{p}_N^j = \tilde{p}_I^w = \tilde{p}_I^j \), and so non-participant welfare is preserved.

**Proposition 3 (Welfare Preservation: Reciprocity and MFN):** Any bilateral agreement between the governments of the home country and foreign country \( i \) that satisfies the principles of reciprocity and non-discrimination leaves unaltered foreign country \( j \)'s terms of trade and therefore preserves the welfare of the government of foreign country \( j \).

–Reciprocity and MFN work in tandem to mimic the effects of the market access preservation rule.

–MFN serves as a simple means to “multilateralize” bilateral negotiations.

–Reciprocity ensures that the multilateral presence so achieved preserves non-participant welfare.

**3.4 Remaining Issues**

–Are these rules necessary? A general answer is beyond the reach of any single model.

–Depends on initial agreement, and participants’ beliefs about possible responses of non-participant in the future.
We approach this question as follows:

- Position initial tariffs on the efficiency frontier;

- Specify the rules that govern bilateral negotiations;

- Ask: Does there exist a permitted bilateral agreement under which the participants gain, when they take as fixed the tariff of the non-participant?

  If so, the bilateral agreement must be opportunistic, and we say that the initial efficient tariff vector is vulnerable to bilateral opportunism.

- A limitation: the non-participants eventual response to the bilateral agreement is not modeled.
4. Discriminatory Environments

4.1 Government Preferences in Reduced Form

– \( \hat{W}(\tau^1, \tau^2, \tau^*_1, \tau^*_2) = W(p, T) \).
– \( \hat{W}^*(\tau^1, \tau^2, \tau^*_1, \tau^*_2) = W^*(p^*_i, \tilde{\rho}^w_i) \).

**Assumption 1 (Externalities):** We restrict attention to efficient tariffs for which, for \( i, j = 1, 2 \) and \( i \neq j \),

(i). \( \hat{W}_{\tau^1} > 0 \) and \( \hat{W}^*_{\tau^1} > 0 \);

(ii). \( \hat{W}_{\tau^2} < 0 \) and \( \hat{W}^*_{\tau^2} < 0 \);

(iii). \( \hat{W}^*_{\tau^*_i} > 0 \) and \( \hat{W}^*_{\tau^*_j} > 0 \).

– Assumption 1 directs attention to the set of efficient trade agreements consistent with GATT tariff bindings.

– (i) and (ii) suggested by the nature of GATT bindings.

– (iii) is implied by (ii) under the model of Section 2.
4.2 Characterization of Efficient Tariffs

–An efficient vector of tariffs, $(\tau_1^e, \tau_2^e, \tau_1^*, \tau_2^*)$, must solve

**Program W:**

Choose $(\tau_1, \tau_2, \tau_1^*, \tau_2^*)$ to maximize $\hat{W}(\tau_1^1, \tau_2^2, \tau_1^*, \tau_2^*)$

$s.t. \ W^*(\tau_1, \tau_2, \tau_1^*, \tau_2^*) \geq \bar{W}^i = \hat{W}^*(\tau_1^1, \tau_2^2, \tau_1^*, \tau_2^*)$, for $i=1,2$.

**Proposition 4 (Efficient Tariffs):** If $(\tau_1^1, \tau_2^2, \tau_1^*, \tau_2^*)$ is an efficient vector of tariffs, then for $i, j=1,2$ and $i\neq j$, we must have that

$$\frac{\hat{W}^*_{\tau^j_i}}{\hat{W}^*_{\tau^i_i}} > 0 > \frac{\hat{W}^*_{\tau^i_i}}{\hat{W}^*_{\tau^i_i}}$$

–Figure 2.

4.3 Bilateral Opportunism

–Absent any rules, the home government could raise $\tau^j$ in a bilateral negotiation with the government of foreign country $i$, and by Assumption 1 both would gain.

–A bindings restriction would prevent this, but it cannot solve the bilateral opportunism problem: Figure 2.
Figure 2
**Proposition 5 (Bindings and Efficient Tariffs):** Whether or not a bindings restriction is imposed, every efficient tariff vector is vulnerable to bilateral opportunism.

–By lowering the tariffs that they apply to one another, the participating governments cause a terms-of-trade loss for the non-participant, and convert this to their own gain.

–The market access preservation rule blocks opportunistic bilateral agreements of this kind: Figure 2.

–What about the nullification and impairment rule?

–Stability implies that $\tilde{p}^{wj}$ cannot fall as a result of an agreement between the home country and foreign country $i$ that satisfies this rule: Figure 2.

**Proposition 6 (Nullification and Impairment Rule and Efficient Tariffs):** Under the nullification-and-impairment rule, no efficient tariff vector is vulnerable to bilateral opportunism.

–GATT’s nullification-and-impairment rule may play an important role in preventing bilateral opportunism, but is a cumbersome solution to a pervasive problem.

–Propositions 3, 5 and 6. First line of defense: Reciprocity and MFN; Second line of defense: nullification and impairment.
5. Non-discriminatory Environment

5.1 Government Preferences in Reduced Form

\[ \tilde{W}(\tau, \tau^1, \tau^2) = \hat{W}(\tau, \tau^1, \tau^2) = W(p, T). \]

\[ \tilde{W}^* (\tau, \tau^1, \tau^2) = \hat{W}^* (\tau, \tau^1, \tau^2) = W^* (p^*, \tilde{p}^w). \]

Assumption 1' (Externalities): We restrict attention to MFN-efficient tariffs for which, for \( i, j = 1, 2 \) and \( i \neq j \),

(i). \( \tilde{W}_\tau > 0 \) and \( \tilde{W}^*_{\tau^i} > 0 \);

(ii). \( \tilde{W}^*_{\tau^i} < 0 \) and \( \tilde{W}_\tau < 0 \);

(iii). \( \tilde{W}^*_{\tau^*j} > 0 \) and \( \tilde{W}^*_{\tau_j} > 0 \).

5.2 Characterization of MFN-Efficient Tariffs

An MFN-efficient vector of tariffs, \( (\tau_m, \tau_m^1, \tau_m^2) \), must solve

Program MFN-W:

Choose \( (\tau, \tau^1, \tau^2) \) to maximize \( \tilde{W}(\tau, \tau^1, \tau^2) \)

s.t. \( \tilde{W}^* (\tau, \tau^1, \tau^2) \geq \hat{W}^* \equiv \tilde{W}^* (\tau_m, \tau_m^1, \tau_m^2), \) for \( i = 1, 2 \).
Proposition 7 (MFN-Efficient Tariffs): If \((\tau_m, \tau^*_m, \tau^*_m)\) is an MFN-efficient vector of tariffs, then we must have that either:

(i). \(W_p > 0\), and for every \(i \in \{1,2\}\), \(W^*_{pi} > 0\) and

\[
\frac{\partial \tilde{p}^w/\partial \tau}{\partial \tilde{p}^w/\partial \tau^*_i} > \frac{\tilde{W}_{\tau}}{\tilde{W}_{\tau^*_i}} > \frac{\tilde{W}^*_{\tau}}{\tilde{W}^*_{\tau^*_i}}
\]

(ii). \(W_p < 0\), and for every \(i \in \{1,2\}\), \(W^*_{pi} < 0\) and

\[
\frac{\tilde{W}^*_{\tau}}{\tilde{W}^*_{\tau^*_i}} > \frac{\tilde{W}_{\tau}}{\tilde{W}_{\tau^*_i}} > \frac{\partial \tilde{p}^w/\partial \tau}{\partial \tilde{p}^w/\partial \tau^*_i}; \text{ or}
\]

(iii). \(W_p = 0\), and

(a). for every \(i \in \{1,2\}\), \(\frac{\tilde{W}_{\tau}}{\tilde{W}^*_{\tau^*_i}} = \frac{\partial \tilde{p}^w/\partial \tau}{\partial \tilde{p}^w/\partial \tau^*_i}\) and

(b). there exists \(j \in \{1,2\}\) s.t. \(\frac{\tilde{W}^*_{\tau}}{\tilde{W}^*_{\tau^*_j}} = \frac{\partial \tilde{p}^w/\partial \tau}{\partial \tilde{p}^w/\partial \tau^*_j}\) and \(W^*_p = 0\).

–Three cases for MFN-efficient tariff vectors.

–Figure 3A.
–Figure 3B.
–Figure 3C.
Figure 3B
Figure 3C
5.3 Bilateral Opportunism

–Are MFN-efficient tariffs vulnerable to bilateral opportunism?

–Figure 3A: Vulnerable, with or without bindings.

–Figure 3B: Vulnerable without bindings.

–Figure 3C: MFN-Political-Optimum not vulnerable.

Proposition 8 (MFN and Efficient Tariffs):

(A). Under the MFN Rule, an MFN-efficient tariff vector is not vulnerable to bilateral opportunism if and only if it is politically optimal.

(B). Under bindings and the MFN Rule, an MFN-efficient tariff vector is not vulnerable to bilateral opportunism if and only if:

(i) \( W_p < 0 \); or (ii) \( W_p = 0 \) and \( W_p^*i \leq 0 \) for every \( i \in \{1,2\} \).

–On its own, MFN offers only a partial solution to the bilateral opportunism problem.

–With reciprocity, MFN solves the problem: e.g., Figure 3A.

–Propositions 3, 5, 6 and 8. First line of defense: Reciprocity and MFN together; Second line of defense: nullification and impairment.
6. Many Goods

–The tandem rules of MFN and reciprocity continue to provide a solution to the terms-of-trade-driven bilateral opportunism problem in a many good environment.

–An additional local-price-driven bilateral opportunism problem may arise with many goods, but under limited circumstances.

–In a many-good world:

  –MFN and reciprocity provide a first-line solution to the most pervasive problems of bilateral opportunism;

  –Nullification and impairment provides a second line of defense.
7. Conclusion

–GATT is a continuous negotiating forum.

  –Bilateral exchange of market access; Secured by tariff bindings; Multilateralized by MFN.

–On-going negotiations might lead to bilateral opportunism.

–Findings: The bilateral opportunism problem is potentially severe, and GATT’s central rules can provide a solution.

–Identified a market access preservation rule that solves the problem.

–Showed that nullification and impairment offers a complete but cumbersome solution.

–Showed that MFN offers a partial solution.

–Showed that reciprocity and MFN together solve the problem, by mimicking the market access preservation rule.

–Nullification and impairment to police preferential agreements (and local-price-driven bilateral opportunism).

–Reciprocity as a solution to “free-rider” problem with MFN?