The GATT: It's Everywhere You Want it to Be

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Tomz, Goldstein, and Rivers (hereafter "TGR") argue that the General Agreement on Tariffs and Trade and its successor the World Trade Organization (hereafter "GATT") had a substantial positive effect on trade. Their paper is a critique of my article "Do We Really Know that the WTO Increases Trade?" which appeared in this *Review*, 2004. Among other things, I used a bilateral "gravity" model of trade and showed that dummy variables for membership by either one or two countries in the GATT had only small effects on trade. In essence, TGR point out that a lot of countries were not formal members of the GATT but still participated in it as colonies, *de facto*, or provisional members. TGR argue that if one includes these other types of more informal participation, one gets large positive effects.

For what it's worth, I stated in my original article that *de jure* accession to GATT need not be the same as *de facto* accession, but I wasn't able to quantify it and encouraged others to do so. TGR did precisely that, at the cost of much tedious archival work. I applaud them for it and will certainly not question its accuracy. I also like their methodological strategy, which is to follow my empirical framework closely and rely mostly on simply adding informal participation to formal GATT membership. TGR cite my work selectively but extensively. It's a clean and effective way to proceed.

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I like this paper, and have learned a lot by reading it, and thinking about the issues it raised. All who are interested in the topic of the impact of the multilateral system on trade should take it seriously. Still, I have concerns about the meaning, plausibility and robustness of their results.

1. Sweet

A few things before I get into the meat. First, I take any critique as the most serious sign of academic praise, so I thank TGR for caring enough to write their paper.

Second, there are many things in TGR with which I agree. For instance, TGR are clearly right on a number of small data issues (e.g., coding Benin, Comoros, various colonies, etc.) I'm happy to see that these corrections only strengthen my results. They're also right that that most colonies aren't formal members but were covered by the GATT. I should have coded them accordingly myself (and actually intended to).

Third, a note of puzzlement. When I first presented this research at seminars, the initial reaction to my finding of GATT irrelevance was inevitably disbelief. Still, within an hour or so, almost everyone came to the view that I'd actually found little new. That is, once one has reflected a little, it seemed reasonable (to both me and others) that membership in the GATT might have had little effect on trade. Why? Reasons include the following:

1. The GATT made few demands on most countries in terms of liberalization, since most entrants were developing countries eligible for special and differential treatment.
2. Most Favored Nation status might seem like the great prize of GATT membership. But MFN status is often given freely away to countries outside the GATT.
3. Tariffs have been lowered by developed countries under the auspices of the GATT. But most economists are aware of the (deplorable) fact that non-tariff barriers (NTBs) have often been increased as substitute protectionism. And much trade of late has

grown under the auspices of complicated preferential trade agreements that undermine the multilateral importance of the GATT.

4. In the voluminous and controversial literature on trade and growth, no scholar, to my knowledge, has ever dated trade liberalization with GATT accessions. If accession means liberalization and trade growth, why has no one ever tried to figure out if growth follows GATT accession?
5. There are other reasons why trade has grown: declining transportation costs, higher productivity growth in tradables, and so forth.

2. Sour

I have five major issues with TGR (a number of minor quibbles are presented in the web-only version of this paper). They concern: 1) the role of developing countries; 2) the relative size of membership and informal-participation effects; 3) results from event studies; 4) effects on aggregate trade; and 5) trade policy patterns.

2a. The Essential Role of Developing Countries

The TGR argument hinges essentially on certain developing countries that informally participated and seemed to trade more than outsiders. It's ironic to me that I've been criticized by Subramanian and Wei (2007) for including ANY developing countries at all. Their basic view (and that of most others) is that the GATT was essentially a club for developed countries.[2] Their argument is that by including developing countries that are technically but not spiritually GATT members, I've rigged the analysis to make the GATT look irrelevant. Since almost all the non-member GATT participants were developing countries, TGR say almost the opposite. They show that the relevance of the GATT can be

rescued through re-classifying many developing countries which are spiritually but not technically GATT members.

Since my issue here is really the incongruity of TGR with the literature, let me include a couple of typical excerpts that illustrate my discomfort. Schott (2004, pp 9-10) writes:

> "Why are developing countries so interested in FTAs [free trade areas]? In the past, these countries were able to obtain improved access to industrial markets through GATT negotiations that did not require them to reciprocate by opening their own markets to foreign competition. While useful, prior GATT rounds had two major shortcomings: they did not prompt policy changes in developing countries that would induce adequate flows of investment and transfers of technology (apart from extractive industries), and competitive agricultural and manufactured exports of developing countries often were excluded from the reforms. In short, developing countries were free riders on the GATT system until the Uruguay Round, but derived only modest benefits from their own minimal contributions to GATT negotiations. They protected their own markets, but in turn had to accept the maintenance of high foreign trade barriers against their most competitive exports."

Alternatively, consider Anne Krueger (2000, p7):

> "Developing countries' attitudes and trade policies during the 1950s and 1960s generally resulted in heightened walls of protection as industrialization through "import substitution" was attempted. That generally meant that developing countries were not benefiting as much as they might have from the growth of the world economy, while the "balance-of-payments" provisions of the GATT were liberally interpreted to enable developing countries to maintain quantitative restrictions, often including import prohibitions, on their imports. Moreover, the GATT articles were amended in the early 1960s to provide non-reciprocal preferential treatment of imports from those countries. One consequence was that developing countries (the East Asian newly industrializing countries being a prominent exception) were losing shares of their world markets …"

It's worth stressing that developing countries are key to TGR. The first couple of rows of their Table 4 indicate that GATT participation has a statistically marginal effect on trade when you look only at industrial countries, even though there are almost 15,000 observations. The effect is only really statistically significant when you include developing countries, and it's also larger in that case. I find it implausible that the effect of the GATT on trade works principally through developing countries.

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[2] E.g., the third sentence of Barton et al (2006, p1) who argue that, in contrast to the GATT, the WTO is "not just a club of Western trading nations."

2b. Membership versus Informal Participation

One of the striking features of TGR's results is that *informal participation* consistently matters more for trade than *formal membership*. This doesn't seem plausible; I simply don't understand why informal participation could create more trade than actual membership in the GATT. TGR acknowledge this and also find it difficult to explain.

The hypothesis that informal participation in the GATT is equal to formal membership is eminently testable, in terms of both economic and statistical significance. It is always rejected. Columns (3)-(5) of TGR's Table 2 shows that formal GATT members share less trade *ceteris paribus* than a pair of informal GATT participants, no matter how you estimate the equation (the mixed results in between). The differences are economically huge and statistically distinguishable at the .0001 level.[3]

A related point concerns the different types of informal participation. There are three types of informal participation: colonies, *de facto* membership, and provisional membership. One might ask: are they alike economically? Statistically? The answers are tabulated below. I provide two tables: Table 1 has results pooled across time, and while Table 2 covers cross-sections. Clearly the effects of different types of participation are economically and statistically different. It would be enlightening to know why informal participation seems typically to have a larger effect on trade than formal membership. Until we know, these differences are troubling.

Even then, not all informal participation is alike. *De Facto* participants often seemed to join in the letter of the GATT but not the spirit of liberalization (and thus ironically might be described as *de jure* participants); such countries could alter trade policy without even notifying the GATT! Cambodia, for instance, was a *de facto* GATT participant for 44 years, and never ended up joining either the GATT or the WTO. Algeria was *de facto* for 35 years

and never joined; the list is long. In fact, nineteen countries maintained *de facto* status for at least twenty years, and another fourteen kept it for at least a decade! It seems hard to believe that *de facto* GATT participation was associated with much liberalization, given that countries exploited it for so long.[4] There are few signs of much liberalization by the *de facto* participants; while most data are missing, customs duties as a percentage of imports were some 18.8% for Algeria (and 42.1% for the Seychelles, another long-term *de facto* participant) in 1994, immediately before the creation of the WTO. This skepticism is reinforced by the fact that the WTO ditched the category when it came into being. None of this would be particularly important if the results of TGR didn't rest on *de facto* participation. But treating *de facto* participation as non-participation weakens TGR's results substantially, as one can see in Table 3. It is disturbing that *de facto* membership seems to make only weak demands on participants but is important to the results.

2c. Where's the Big Effect on Aggregate Trade?

TGR cite my work extensively, but selectively. In my original work on the GATT, I used multilateral data as a corroborating check on my bilateral results. When I use the TGR participation variables on multilateral data as I do in Table 4, I get weak results. The coefficients are positive, but they're economically small and have marginal statistical effects, even in a panel with over 5,000 observations. The highest estimate indicates that participation in the GATT raises trade by 12%; but TGR's default estimate is that bilateral trade between participants is 72% higher.

This is an issue for TGR, since they basically never seen any signs of trade diversion. For instance, in the default TGR results of Table 2, column 6, the "only one participates in

[3] TGR use a specification that includes only a single dummy variable for both formal membership and all types of informal participation.

[4] Most *de facto* participants that eventually joined the GATT did so shortly before it was replaced by the WTO, thereby sparing themselves a potentially much more difficult accession process.

GATT" coefficient is 0.26 (standard error of .06). But if there's no trade diversion, why isn't the aggregate trade creation visible? After all, almost all countries participated in the GATT. And don't forget the background fact: trade was growing fast throughout the period (faster than output usually). The GATT usually takes credit for at least some of this growth in trade. Why isn't it detectable with TGR participation?

2d. Where's the Dynamic Effect of Joining?

In my original paper, I provided event studies, which graphically examined the decade around the formal entry of countries into the GATT. I found little; the ratio of aggregate trade to GDP basically didn't change much when one examined openness starting five years before accession and continued through to five years afterwards. What happens when one examines openness around entry into informal GATT participation?

Figure 1 contains four event studies for openness (the ratio of exports plus imports to output) in the decade around GATT entry (they are analogues to the event studies in my original paper). 33 countries formally entered the GATT from the outside; they are portrayed in the top left graphic. The others depict: a) formalization of status for an informal participant; b) entry into informal status from the outside; and c) exit from participation.

When I study the figures I don't see strong evidence that openness rose during the period around either formal or informal GATT entry. Raw openness falls somewhat when countries leave the GATT.[5] But entry into the GATT – either formally or informally – seems to have had any substantial effect on aggregate trade, and the same is true when a country formalizes its GATT status. Why not? How can TGR believe that participation boosts bilateral trade so much if it doesn't have a strong detectable affect aggregate trade?

2e. Where's the Effect of Participation on Trade Policy?

The effect of GATT/WTO membership on trade flows was part of a larger project of mine concerning the consequences of the multilateral trade system. I have a whole article (*JIE* 2004) that argues that the non-effect of formal membership on trade *policy* helps explain my non-results of membership on trade. Since trade policy is hard to measure, I used almost seventy measures of it. I found that trade policy varied little between members and non-members, which rationalized my finding that trade flows were unaffected by membership. What happens when you use TGR's measure of participation in place of my measure of formal membership? Little. When I use the TGR participation variables on the multilateral panel measures of trade policy that I used in that article, I get the weak results in Table 5. There are basically no detectable differences in trade policy between outsiders and TGR participants.[6]

Rodriquez and Rodrik (1999) recommend simple trade-weighted tariff averages as a measure of trade policy; their view is that while flawed, average tariffs still do a decent job of measuring trade policy. This seems sensible to me. Further, there are many hundreds of country-year observations on tariffs, as measured by the ratio of import duties to imports. The top line in the table above shows that countries that participate in the GATT (either formally or informally) have *higher* tariffs than outsiders, though not significantly so.

Such findings are a serious concern for the message of TGR. How can participation affect trade if it doesn't affect trade policy?

3. Conclusion

To summarize, I'm queasy about the TGR results for a number of reasons:

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[5] This effect vanishes when standard controls are used for openness; details are available in the web-only version.

[6] I use only the panel measures so that I can use TGR's preferred FE estimation strategy. Others may choose to analyze the many cross-sectional measures of trade policy available at my website.

1. It is hard to believe that GATT could have a profound effect on developing countries and a relatively small effect on industrial countries,
2. It is hard to believe that formal GATT membership matters so much less for trade than informal (especially *de facto*) participation in the GATT,
3. I don't see how entry into the GATT (either formal or informal) could matter so much when event studies show a negligible effect in the decade around entry,
4. I don't understand how GATT participation can have a large effect on bilateral trade, no detectable trade diversion, and yet a negligible effect on aggregate trade,
5. I don't understand how participation can have a large effect on trade with no substantial effect on tariffs or other measures of trade policy.

Let me conclude. Tomz, Goldstein and Rivers argue that non-membership in the GATT had its privileges since informal participants traded more than outsiders. But they lose sight of the question asked in the title of my original paper, "Do We Really Know that the WTO Increases Trade?" In my research, I have found a consistently negative answer to that question using: a) a panel of bilateral data; b) a large panel of aggregate data; c) a panel of data on trade policy; and d) event studies. They have raised doubts about the results I get from the first technique. Let me be charitable and ignore the issues I've just raised; the score is one down, and three to go! I look forward to seeing more research that addresses the question in the large, not just in the smaller confines of the gravity model of trade.

References

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Table 1: Effects of Different Types GATT Participation on Trade

	Dyadic Fixed Effects	OLS
Member-Member	.47 (.06)	.17 (.07)
Member-Colony	.66 (.07)	.63 (.08)
Member-*De Facto*	.60 (.07)	.40 (.08)
Member-Provisional	.31 (.07)	-.12 (.09)
Colony-Colony	1.52 (.20)	1.67 (.20)
Colony-*De Facto*	.91 (.14)	1.03 (.21)
Colony-Provisional	.54 (.15)	.34 (.14)
De Facto*-*De Facto	.93 (.17)	.62 (.28)
***De Facto*-Provisional**	.62 (.17)	-.16 (.18)
Provisional-Provisional	.26 (.26)	-.26 (.23)
Member-Outsider	.23 (.06)	.06 (.07)
Colony-Outsider	.52 (.09)	.54 (.11)
***De Facto*-Outsider**	.34 (.09)	.32 (.13)
Provisional-Outsider	.08 (.08)	-.13 (.12)
Test: All (10) types of participation equal? (P-value)	.0000	.0000
Test: All (9) types of informal participation equal? (P-value)	.0000	.0000

Robust standard errors in parentheses. 234,597 observations from 187 "countries" 1948-1999. Regressors included but not tabulated include: GSP; regional FTA; currency union; log distance; log product GDP; log product real GDP per capita; common language; common border; number land-locked; number island nations; log product area; common colonizer; current colony; ever colony; common country; and year effects.

Table 2: Analogue to Tomz et al Table 5: Cross-Sectional Analysis, dis-aggregated by status

	Both Formal	Both Informal	Formal-Informal	Formal-Outsider	Informal-Outsider	Obs.
1950	.66 (.12)	.72 (.41)	.50 (.13)	.25 (.10)	.34 (.16)	1115
1955	.79 (.12)	1.19 (.30)	.74 (.13)	.39 (.11)	.42 (.16)	1468
1960	.65 (.12)	.66 (.16)	.33 (.11)	.29 (10)	.37 (.11)	2625
1965	.36 (.11)	.32 (.17)	.41 (.11)	.24 (.11)	.33 (.13)	3361
1970	.22 (.13)	1.90 (.30)	.78 (.14)	.16 (.13)	.47 (.19)	4737
1975	.07 (.15)	1.06 (.27)	.53 (.16)	.07 (.15)	.47 (.21)	5354
1980	.31 (.16)	1.01 (.28)	.57 (.17)	.35 (.17)	.43 (.21)	5895
1985	.44 (.22)	.77 (.43)	.74 (.23)	.21 (.23)	.58 (.30)	6232
1990	.74 (.30)	.26 (.62)	.85 (.31)	.55 (.31)	.51 (.41)	6620
1995	-.50 (.24)	-.90 (.58)	-.60 (.27)	-.68 (.25)	-.50 (.42)	7640

Regressand: log real trade. Robust standard errors (clustering by country-pairs) in parentheses. OLS. Regressors not recorded: regional FTA; currency union; log distance; log product real GDP; log product real GDP p/c; common language; land border; number landlocked; number islands; log product land area; common colonizer; currently colonized; ever colony; and common country.

Table 3: Dropping *De Facto* GATT Participation on Trade

	Dyadic Fixed Effects	OLS
Member-Member	.00 (.03)	-.13 (.04)
Member-Colony	.18 (.05)	.32 (.06)
Member-Provisional	-.14 (.05)	-.42 (.07)
Colony-Colony	.96 (.19)	1.35 (.19)
Colony-Provisional	.07 (.14)	.03 (.13)
Provisional-Provisional	-.14 (.26)	-.65 (.23)
Member-Outsider	-.17 (.03)	-.23 (.04)
Colony-Outsider	.12 (.08)	.24 (.10)
Provisional-Outsider	-.27 (.07)	-.42 (.11)

Robust standard errors in parentheses. 234,597 observations from 187 "countries" 1948-1999. Regressors included but not tabulated include: GSP; regional FTA; currency union; log distance; log product GDP; log product real GDP per capita; common language; common border; number land-locked; number island nations; log product area; common colonizer; current colony; ever colony; common country; and year effects.

Table 4: Effects of GATT Participation on Aggregate Trade

	Formal GATT Membership	GATT Participation
OLS	.05 (.05)	.10 (.06)
Year Effects	.01 (.05)	.07 (.06)
Country Effects	.03 (.04)	.12 (.06)
Year and Country Effects	.03 (.05)	.11 (.06)

Robust standard errors in parentheses. Controls included but not tabulated: log real GDP per capita; log population; remoteness. 5,476 observations from 168 "countries" 1950-1998.

Table 5: Effects of GATT Participation on Trade Policy

Regressand	GATT Participation
Tariffs (Import duties, % imports)	1.4 (1.1)
NBER liberalization phase	-.02 (.24)
Index of Economic Freedom	-.03 (.05)
Trade Policy Measure from IEF	-.13 (.15)
Annual Index Trade Liberalization (from FX, Commercial Policy)	-.01 (.02)
Annual Index Trade Liberalization (Tariffs, NTBs)	.68 (.17)
Indirect Bias against Agriculture	-.0001 (.0002)
Deviation of trade from simply gravity model	-.19 (1.11)
Deviation of trade from augmented gravity	-.06 (1.07)
Movement towards International Prices	.07 (.03)
Modified Price Distortion Index	-.05 (.03)
Black Market Premium	-.09 (.10)
Openness (Trade, % GDP)	2.9 (2.9)
Trade share of GDP	.01 (.01)

Robust standard errors in parentheses. Controls included but not tabulated: log real GDP per capita; log population; remoteness; year effects; and country effects.

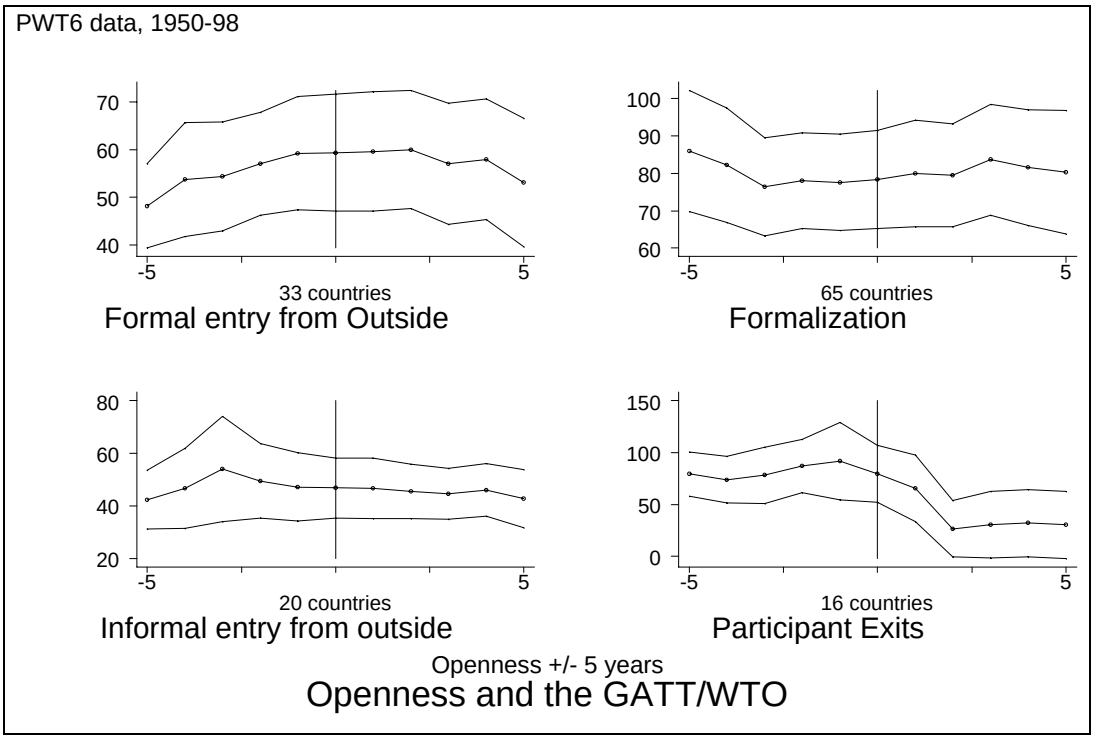

Figure 1: Openness (Trade/GDP) around GATT Entry