

Response to Subramanian and Wei¹

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What's the Buzz?

In the summer of 2002, I started to circulate research that argued it is not clear that the World Trade Organization (“WTO”) or its pre-1995 predecessor the General Agreement on Tariffs and Trade (“GATT”) have actually increased trade. My argument was empirical and used two sorts of evidence. First, in my 2004 paper, I used bilateral and multilateral data sets to show that trade flows seemed little different between members and non-members. More precisely, the differences seemed economically small and were often statistically insignificant. Second, in my 2002 paper, I compared a large number of trade policy measures across members and non-members, and again found few significant differences.

Subramanian and Wei (2003) (hereafter “SW”) paper argue that my (2004) paper “is incomplete and can be misread seriously.” They provide two grounds. First, the majority of my econometric work on bilateral trade flows does not include country-specific fixed effects. Second, I did not take account of three different “asymmetries” in the data: a) the difference between industrialized and developing countries; b) the difference between countries that joined the GATT before the Uruguay round, and those that joined the WTO afterwards; and c) differences across sectors associated with the degree of liberalization achieved under the GATT/WTO. Below, I respond to these criticisms.

Top Notes

To have a critique published on your paper is a high honor. Only those who care take the pains to work on a dispute. So I want to begin by thanking SW for their article, and its implicit praise.

A second opening note: puzzlement. When I present this research at seminars, the initial reaction to my finding of GATT/WTO irrelevance is inevitably disbelief. Still, within an hour or

¹ I thank Shang-Jin Wei for our many collegial interactions, including supplying me with his data sets and programs. Data sets, key output, and a current copy of this paper are all available at my website, <http://faculty.haas.berkeley.edu/aroze>.

so, almost everyone thinks that I've actually found little that's new. That is, once one has reflected a little, it seems reasonable (to both me and others) that membership in the GATT/WTO might have had little effect on trade. Why?

1. The GATT historically made few demands on most countries in terms of trade liberalization, since most entrants to the GATT/WTO have been developing countries eligible for special and differential treatment. The GATT/WTO has always been a relatively toothless institution (by design), and has few levers to encourage liberalization. If accession to the GATT/WTO doesn't force countries to liberalize (as seems true in the data), why should one expect accession to have a measurable impact on trade? And if accession isn't the time when the GATT/WTO forced countries to liberalize, are they really effective agents of liberalization?
2. Most Favored Nation (MFN) status might seem like the great prize of GATT/WTO membership. It turns out that MFN status is typically given freely away.²
3. Tariffs have been lowered by developed countries under the auspices of the GATT. But most economists are also well aware of the (deplorable) fact that non-tariff barriers (NTBs) have often been increased as substitute protectionism.
4. In the voluminous and controversial literature on trade and growth, no scholar, to my knowledge, has ever dated trade liberalization with GATT/WTO accessions. (Sachs and Warner 1995, for instance, tie liberalizations to the aftermath of macroeconomic crises.) If accession means liberalization and trade growth, why has no one ever tried to figure out if growth follows accession? Simple: liberalization dates have little to do with GATT/WTO accession.
5. There are many other reasons why trade has grown, including declining transportation/communication costs, higher productivity growth in tradeables, and so forth.

Finally and on a more personal note, I performed a great deal of sensitivity analysis in my research. This included, at least in passing, essentially all the criticisms levied at my work by SW. How could I have messed up so badly in such obvious ways?

² For instance, in 2003 only four countries (Cuba, Laos, North Korea, and Serbia) did not have normal trade relations (the equivalent of MFN status) with the United States, even though many countries were not in the WTO (Russia and Saudi Arabia being perhaps the most prominent non-members).

(A parenthetical note in passing: this note is intended to be constructive, not overkill. Then again, I do want to defend my work!)

The Case for the Prosecution

At the outset, let me set out the areas of agreement between SW and me. In particular, I agree with SW that:

- fixed effects estimators in bilateral gravity equations typically deliver positive and statistically significant effects of GATT/WTO membership on trade,
- industrialized countries have liberalized more than developing countries, and accordingly experienced more trade growth,
- the WTO has done little to encourage liberalization in the South
- it would be good if the WTO liberalized trade more than the GATT did,
- the GATT/WTO has been ineffective in reducing trade barriers in agriculture, textiles, footwear, and clothing, and
- more trade liberalization is better than less.

These are large areas of agreement, and indeed there is little substantive difference between my policy views and SW.

I organize my issues with SW into four themes. The first discusses multilateral trade and trade policy. Next, I discuss the asymmetries in liberalization and trade growth across countries, sectors, and time. Third, I discuss the issue of fixed effects. Finally, I suggest an encompassing framework to reconcile our findings.

1: What Happened to Multilateral Data?

The two key SW critiques of my work have to do with the fact that I've ignored a) fixed effects and b) differences across countries (and also time and sectors). Why can't one investigate these issues using multilateral data? *There is nothing inherently bilateral in the criticisms.* In my work, I used both bilateral and multilateral data, and to my mind, they gave the same result. What about SW?

1a. Trade

SW argue that the GATT/WTO has liberalized trade flows (if one looks carefully). Are these results apparent in multilateral data? Mine seem to be (at least to me); indeed I usually begin a seminar by presenting multilateral data. The question is: does GATT/WTO membership raise trade for industrial (and possibly developing) countries, when we look at multilateral trade? This is an interesting and important question that SW simply didn't pursue.

In Appendix 3a of my paper, I ran regressions of openness (exports plus imports divided by GDP) on GATT/WTO membership and controls. I found no compelling evidence of membership on openness. SW might respond that I didn't include country fixed effects, and I didn't split industrial from developing countries. True enough; what if I do? Tables 1a and 1b are two sets of results which regress openness on membership (by anyone, and only industrial countries) controls, and fixed effects. Consistent with my previous work, neither delivers convincing evidence that membership raises openness, even with fixed effects and allowing industrial and developing countries to have separate effects.

Question: if allowing for fixed effects and separate effects for industrial and developing countries doesn't reveal any obvious effect of GATT/WTO membership on multilateral trade, how do SW defend their view?

1b. Trade Policy

If the GATT/WTO has liberalized trade, shouldn't this be visible in measures of trade *policy* as well as trade? Looking at the success of the GATT/WTO by relying completely on trade *outcomes* is problematic since there are many determinants of trade. It's difficult to measure trade policy, so one should be careful; but aren't more noisy indications of the GATT/WTO's success better than fewer? I analyzed trade policy in my (2002) article and found almost no differences in a variety of measures of trade policy between GATT/WTO members and non-members. Did I mess up? If not, how do SW explain my negative results?

For instance, SW claim that "developed countries, under successive rounds of trade negotiations, have successfully reduced their tariff barriers." True. But the last column of row 2 of table 3 of my 2002 paper analyzes import duties as a percentage of imports, the tariff measure favored by Rodrik and Rodriguez. It turns out that duties are slightly higher (by economically and statistically insignificant amounts) for GATT/WTO members in a panel regression with year and country effects, controlling for economic size, GDP per capita and remoteness. Any effect

of membership sure seems weak! The question is not whether tariffs have fallen; they have. Rather, the question is whether the GATT/WTO encouraged this as manifest in e.g., bigger drops in protection for its members, and the data don't seem to show it.

For convenience, I reproduce in Table 2 the relevant part of the table, taken directly from my 2002 paper. Note that fixed effects and a variety of controls are included. This (and the many other results in the paper) indicate only very weak links between GATT/WTO membership and a variety of measures of trade policy.

Question: if membership in the GATT/WTO increases trade, where's its measurable effect on trade policy?

2: Patterns of Liberalization

What do we learn from the trade patterns of countries and sectors that have liberalized? SW claim that the GATT/WTO has been successful, since there have been countries and sectors that have liberalized. Why can't one declare failure since some have not?

Question: is it kosher to dismiss my argument that by looking at all countries and all trade, there seems to be little effect on average?

2a. Selection Bias

Clearly not all countries and sectors have liberalized equally. SW write "If WTO membership is a proxy for trade liberalization, then it should have had a greater impact on trade volumes where barriers came down compared with sectors where barriers have remained high." But *ex post* liberalization is an outcome which SW select on; why shouldn't one think of membership as being an *ex ante* predictor for liberalization for all sectors? The issue of *selection bias* seems to be generically important for investigating asymmetries. Currently, SW seem to be arguing "The GATT has worked well, if you ignore most countries and most protectionism" or "If you ignore its many failures, the GATT/WTO has been successful."

Question: by conditioning on its successes, do SW get an accurate view of the effects of GATT/WTO membership?

2b. Agriculture

Agriculture is highly tradable, and has historically been the battleground for commercial policy (the repeal of the Corn Laws is commonly considered the beginning of the modern era of commercial policy, and agriculture is clearly a key reason why the Doha round has thus far met with limited success). If the GATT/WTO has been a successful liberalizer, can one simply ignore its failures in agriculture?

Contrary to SW's view about the design of the institution, it is unclear to me that GATT's failure in this area was anticipated. And it doesn't seem to be consistent with the letter (and certainly not the spirit) of the GATT. SW, on the other hand, conclude (italics added) "the GATT/WTO has done a splendid job of promoting trade *wherever it was designed to do so.*" Consider:

Curzon (1965, p 167) "The General Agreement on Tariffs and Trade makes no distinction between trade in agricultural and industrial products. This is as surprising a phenomena as the complete prohibition of quantitative restrictions ... it may be asked whether it was not short-sightedness or undue optimism which made the Contracting parties decide on equal treatment for all goods entering visible trade except those regulated in special commodity agreements."

Curzon resolves this paradox by arguing that it was vital to both the US (an agricultural exporter) and the UK (defender of the Commonwealth exporters and a historic free importer of agriculture). As for non-European countries,

"Practically all of them exporters of one or several commodities and they could not even have been persuaded to sign a world trading code where trade in what was often their only export was subject to rules less favorable than trade in manufactured products. The only group that might have thought otherwise was Continental Europe, for the European countries had been the strongholds of agricultural protectionism before both World Wars. But Continental Europe at this time was not very articulate... That Europe might have been the only area to object to free trade in agriculture was to be brought out later, however, when it had won back its bargaining power and was no longer dependent on U.S. food deliveries."

Further, Curzon (1965, p 205) states "It is easy ... for critics to say that GATT has failed because it has been unable to solve the problem of agricultural protectionism" although Curzon then argues that it took a good decade for the GATT to eliminate quantitative restrictions and to

substantially lower manufactured tariffs, so he concludes optimistically “The next decade may witness its success in the field of agricultural trade also.”

Also, consider Dam (1970, pp 257-8) who states “It would be difficult to conclude that the GATT’s record in the sphere of temperate agriculture commodities is other than one of failure ... [Agricultural protectionism, especially NTBs] cannot be justified under the provisions of the General Agreement ... there can be little doubt that few of the nontariff barriers on imports of agricultural commodities can be justified under ... special dispensations.”

Question: how should one interpret the GATT/WTO’s failure in agriculture?

2c. Developing Countries

How should one interpret the GATT/WTO’s failure to liberalize developing countries? Again, it doesn’t seem to have been anticipated. For instance,

Dam (1970, pp 227-228) states “... Article XVIII was the principal provision in the General Agreement dealing directly with the trade problems of less-developed countries.” But Dam then argues that Section B of the articles is “only a somewhat more flexible version of Article XII, the basic provision on the use of quantitative restrictions for balance-of-payments purposes ... More important in principle is Section C of Article XVIII. But it has been invoked so rarely that it would be superfluous to explore this exceedingly complex provision at length ...”

For corroboration, see Curzon (1965, p 212).

Question: how should one interpret the GATT/WTO’s failure to liberalize developing countries?

2d. Is the WTO More Rigorous than the GATT?

Personally, I hope that the WTO (established to succeed the GATT in 1995) has been and will be a more effective liberalizer than the GATT. Still, I haven’t been able to see it myself in the data. Is China the new norm (and if it sticks to the spirit of its accession deal), or the exception? I think we need more time and more post-GATT accessions to resolve this issue.

As it is, the SW analysis essentially uses a single WTO-era observation (2000), though we know that individual years have many differences (e.g., SW’s Table 6 has results bouncing around a lot). Even then, the most obvious data (1995, when the WTO came into being) delivers

negligible results, as SW admit.³ More generally I find it hard to believe, as SW do, “the popular view the developing countries were actually integrated into the trading system in the aftermath of the Uruguay Round” given the reluctance of LDCs to cooperate in the Doha round.

Question: given the short span of time, can we quantitatively determine if the WTO has a different effect on trade than the GATT did?

3: Fixed Effects and All That

The first of the two major objections SW raise is the fact that most of my regressions do not include country-specific fixed effects in my gravity equations. When I did include them (in the *first* table of my paper!), the point estimate for the effect of joint membership in the GATT/WTO on trade was .15 (robust standard error of .05), implying that two countries inside the GATT/WTO trade about 16% more, *ceteris paribus*. I dismissed this as “small compared to other effects (e.g., regional trade associations), the long-term growth of trade, intuition, and the hype surrounding the GATT/WTO.”

Since SW have been kind enough to share their data sets and programs with me, I have been able to replicate their results using their specification and data set. I use their default specification, taken from Table 5, column 4 of SW, which regresses real imports on GATT/WTO membership and controls. At the left of Table 3, I tabulate the estimates (from the default SW specification) of the effect of membership by industrial and developing countries in the GATT/WTO on imports.

3a. Which fixed effects estimator is appropriate?

SW use two sets of country-specific fixed effects; one for exporters and another for importers. That doesn't seem obvious to me. First, the standard authority figures in this debate (to whom SW appeal), Anderson and van Wincoop seem to imply that a single set of fixed effects is fine. Certainly others (including me, in my work with Eric van Wincoop) use only one. It turns out in practice to make little difference to the fit of the model (middle column of Table 1), but affects the key SW point estimate. In particular, the point estimate of industrial country membership on imports drops from .52 to .39.

³ I find it hard to believe the SW phase-in argument, given that China and other countries have had to liberalize *before* accession.

Question: how many sets of country-specific fixed effects are appropriate?

3b. Is it obvious that country-specific fixed effects are the solution?

I included only one set of bilateral estimates with country-specific fixed effects, but over a dozen with *country-pair-specific* (“dyadic”) fixed effects. These take into account not multilateral “trade resistance” and other unobservable features *of individual countries*, but trade resistance (and other unobservable features) of the relationship *between each pair of countries*. This seems much more general. Using dyadic fixed effects lowers the key point estimate of industrial country membership on imports even further to .32.

A small note: the SW interpretation on country-pair versus country fixed effects on p 12 is completely screwed up. The difference between on country-pair and country fixed effects is the difference between two sets of “within” estimates. It is simply not the difference between within and “between” estimates. The country-pair estimates account for all time-invariant factors that affect trade between a pair of countries, whereas the country estimates account for all time-invariant national factors that affect trade.

Question: are country-specific or country-pair-specific fixed effects appropriate?

3c. Should one simply throw away cross-country “between” variation?

By including fixed effects SW use only within-group variation, so SW don’t use variation across countries. That is, SW’s estimates answer the question “What is the effect of accession to the GATT/WTO on imports *ceteris paribus*?” But do we really learn nothing from comparing the import behavior of members and non-members? Even if the within estimate is not equal to between estimate, should the latter be discarded? I’ve done a quick between estimation (using the SW default model and data), and the results are tabulated in Table 1. They indicate a *negative* insignificant effect of membership on trade. That’s only a quick and dirty result; but surely the impact of membership on trade from cross-country regressions is of some informational value.

Question: what does one learn from cross-sectional (as opposed to time-series) variation?

Small Notes.

Some of the results from the default SW specification (and variants) don't seem so wonderful. For instance, many of the GDP terms seem small – far below unity. For instance, in the default specification, the coefficient on importer GDP is .5, that of exporter GDP is only .15, and importer GDP per capita has a negative effect. Also the common border effect is insignificant (economically and statistically), and being part of a common country is estimated to reduce trade. The effect of GSP term is smaller than the WTO term, contrary to expectations. Finally, it seems to me that key SW dummy variables are collectively defined incorrectly (more on this below).

4: Methodology

4a. Encompassing

SW's results differ a lot from mine – even my results with country fixed effects (for which I get only .15 – 16% – as the effect of joint GATT/WTO membership on trade). Why? There are a number of possibilities, since the SW methodology differs from mine in many aspects. Are the results different because:

- I use all years instead of data at five-year intervals?
- I don't exclude small trade observations?
- I use one set of country dummies, not two?
- I use trade as my dependent variable, not imports?
- My definition of industrialized countries (I use the IMF definition, and also the World Bank's "High Income" countries)
- My institutional dummies aren't defined mutually exclusively (more on this below)?
- A particular combination of these, or
- Something else?

I feel it is incumbent on SW to provide an encompassing methodology to reconcile our different results. (After all, I went first and provide my data and output freely on the web.) It would make it much easier to figure out whose results are more believable.

4b. Non-Additive Institutional Dummies

I much prefer my way of defining the key institutional dummy variables to that of SW. Consider an observation – say trade between the US and the UK in 1990. I have three key variables; in this case “Bothin” is one since both countries were members of the GATT/WTO in 1990, “Onein” is zero, and “GSP” is also zero since neither country gave GSP preferences to the other. Simple and easy to interpret.

SW on the other hand, try to define their variables mutually exclusively. First regional FTAs are defined. Then countries that are not in FTAs but do give a GSP preferences. Then countries not in FTAs that don’t give GSP preferences but are in the GATT/WTO. Why this mess? It confuses the standard partial derivative computation without any benefit. What’s the “contamination” SW refer to? If there are interaction effects between variables that I missed, simply test the restrictions that I implicitly imposed, reject them, and add the interactions.

There are costs to the SW strategy. For instance, the problems of interpretation imply that SW mess up the total estimated effect on trade that they report. They state (p 10) that using their estimate of the effect of industrial country WTO membership on trade (.52 from SW table 5, column 4) implies industrial countries’ bilateral imports have been 65% ($=\exp(.52)-1$) higher because of membership. This however incorrectly ignores the trade of industrial GATT/WTO members either in FTAs or granting GSP preferences.⁴

Defining variables my way – which seems easier interpret – gives a much smaller estimate of trade impact! (see their Table 7, row 3).⁵

No matter what, SW should check their key institutional variable definitions, which seem mistaken to me. By my count, using SW’s data and program, there are:

- 55,831 usable (>\$500k, etc) observations, of which
- 1565 are in a FTA,
- 7,895 non-FTA members grant GSP,
- 10,452 non-FTA, non-GSP members are industrial, and
- 15,271 non-FTA, non-GSP, non-industrial are members.

So, one might think the number of WTO observations should be $(1565 + 7,895 + 10,452 + 15,271) = 34,959$. But SWs own variables show that there are 40,840 importer observations for

⁴ Also, how can SW not adjust this estimate by acknowledging that some large sectors (agriculture and the other sectors investigated in Table 10) have not experienced much trade growth because of protection? A more effective GATT/WTO would have changed all trade patterns.

⁵ Which accordingly implies it’s not true that the only case in Table 7 where industrial country coefficient declines significant is with dyadic fixed effects, as SW state.

GATT/WTO members. Thousands seem to be missing. (And there's a smaller, related problem. 224 of the FTA observations are for non GATT/WTO members, again, using SWs programmed definition and data).

4c . Would trade liberalization have taken place anyway without the GATT/WTO?

This is fundamentally a metaphysical question, since we have no data from a world without the GATT/WTO. As such it simply can't be tested. What we can compare is variation in trade and trade policy, across time and countries. I'd simply drop the discussion on this, since it (like any counter-argument I might be tempted to make), would be unscientific speculation.

My Recommended To-Do List for SW

Bigger things you should contemplate and consider addressing

1. Multilateral Results
 - a. Trade
 - b. Trade Policy
2. Fixed Effects
 - a. One set of country fixed effects or two?
 - b. Country fixed effects or country-pair fixed effects?
3. What do we learn from cross-country “between” estimates?
4. Selection Bias
5. Was the GATT designed to fail with developing countries, agriculture, textiles, and so forth?
6. An Encompassing Methodology

Smaller things you should definitely redo

1. Definitions of key variables (they’re confusing, and they aren’t mutually exclusive and jointly exhaustive in the way you think)/testing for interactions.
2. Your discussion of country- vs. country-pair specific fixed effects
3. Can we scientifically determine if the GATT provided a Public Good?

References

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**Table 1a: Aggregate Openness and the GATT/WTO:
An Older Smaller Data Set with a More Complete Model**

	Industrial Member of GATT/WTO	Member of GATT/WTO	Log Real GDP per capita	Log population	Remoteness	Obs.	R ²
Country and Time Fixed Effects	-.00 (.14)	.01 (.04)	.19 (.06)	.11 (.11)	-.65 (4.2)	4803	.87
Country and Time Fixed Effects, fewer controls	.07 (.14)	.01 (.05)	.22 (.06)	.05 (.11)		5499	.86
Country and Time Fixed Effects, even fewer controls	.13 (.16)	.01 (.05)				5499	.85
No Time Effects	-.00 (.13)	.01 (.04)	.22 (.05)	.25 (.07)	-4.5 (1.8)	4803	.86
No Country Effects	-.20 (.13)	.03 (.05)	.19 (.05)	-.19 (.02)	-3.0 (1.9)	4803	.54
No Time or Country Effects	-.35 (.12)	.06 (.05)	.24 (.05)	-.18 (.02)	-6.62 (1.6)	4803	.51
Level of Openness as Regressand	-1.98 (9.46)	4.49 (3.66)	13.7 (4.3)	4.44 (9.27)	180. (337.)	4803	.89

Regressand: log of openness (i.e., ratio of exports plus imports to GDP in percent) unless noted.

Data from PWT6; 158 countries, 1950-1998.

Robust standard errors in parentheses.

Extra Controls (included but not reported unless noted) are: a) currency union dummy; b) dependency dummy.

**Table 1b: Aggregate Openness and the GATT/WTO:
A Newer Larger Data Set with a Less Complete Model**

	Industrial Member of GATT/WTO	Member of GATT/WTO
Default	.08 (.15)	-.00 (.05)
No Controls	.14 (.16)	-.00 (.05)
No Time Effects	.11 (.14)	.02 (.04)
No Country Effects	-.08 (.14)	.01 (.06)
No Time or Country Effects	-.30 (.13)	.13 (.05)
Regressand in levels	-.9 (6.9)	4.3 (3.5)
Regressand with constant prices	.18 (.18)	.01 (.06)
Drop post '89 data	.05 (.14)	.02 (.06)

Regressand: log of openness (i.e., ratio of exports plus imports to GDP, current prices, in percentages) unless noted.

Data from PWT6.1; 168 countries, 1950-2000. 5788 observations except last row (4203 observations)

Robust standard errors in parentheses. Year and Country effects included unless specified.

Controls included but not recorded (unless noted): log real GDP per capita and log population.

Table 2: Trade Policy and GATT/WTO membership: Panel Measures
Coefficient on GATT/WTO Membership, Panel regressions

Dependent Variable:		Year Effects	Country Effects	Year and Country Effects
(Exports+Imports)/GDP	2.3 (.6)	-.1 (.0)	4.7 (1.6)	5.3 (1.7)
Import Duties as % imports	-.2 (.1)	-.2 (.2)	1.3 (1.3)	1.8 (1.8)
NBER Trade Liberalization Phase	.2 (.5)	.1 (.4)	.0 (.1)	-.5 (1.0)
Index Economic Freedom	-.4** (3.6)	-.4** (3.5)	-.0 (.2)	.0 (.0)
Trade Policy Measure from IEF	-.3 (1.3)	-.2 (1.3)	-.2 (.9)	-.1 (.2)
Index from FX and commercial policy	-.01 (.5)	-.01 (1.2)	.00 (.2)	.00 (.1)
Index from Tariffs and NTBs	.6* (2.2)	.5 (1.6)	.4* (2.0)	.4* (2.0)
Indirect counter-agricultural bias	-.0006 (1.6)	-.0005 (1.3)	.0001 (.4)	.0001 (.4)
Gravity-Residuals, basic model	-1.3 (.9)	-1.7 (1.2)	-1.8 (1.9)	-1.8 (1.9)
Gravity-Residuals, augmented model	-.8 (.6)	-1.3 (1.0)	-1.6 (1.7)	-1.6 (1.7)
Movement to International Prices	.01 (1.2)	.01 (1.4)	.02 (.7)	.01 (.5)
Modified Price Distortion Index	-.03 (.9)	-.02 (.5)	-.02 (.7)	-.01 (.3)
Black Market Premium	.03 (.4)	.02 (.3)	-.18 (1.7)	-.15 (1.5)

Independent variable is membership in GATT/WTO.

Controls included but not recorded: log(population); log(real GDP p/c); and remoteness.

Absolute t-statistics (computed with standard errors robust to clustering by countries) in parentheses.

** indicates significance at 1%; * at 5%.

Table 3: Fixed Effect Analysis: Default SW specification (column 4, Table 5)

	Importer and Exporter Fixed Effects (SW Default)	Country Fixed Effects	Country-Pair Fixed Effects	Between Estimator
Industrial Importer in WTO	.52 (.05)	.39 (.04)	.32 (.03)	-.21 (.19)
Developing importer in WTO	.07 (.02)	.06 (.02)	.21 (.02)	-.15 (.09)
R²	.71	.70	.44	.93