Staff Working Paper ERSD-2011-13 **Date: 26 September 2011**

World Trade Organization
Economic Research and Statistics Division

The Value of Bindings

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WTO

Manuscript date: 26 September 2011

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by

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Abstract

One of the goals of the multilateral trading system is to enhance the stability and predictability of the environment in which traders operate. Binding tariffs at the WTO reduces the scope for their discretionary use. But, countries have bound tariffs at ceiling levels often substantially above the level of applied tariffs. Therefore, whether the ceiling rate at which countries have committed at the WTO is sufficient to diminish trade policy volatility is an empirical question.

Using a recently built database on applied tariffs covering over 100 countries for the period 1996 to 2009, we find evidence that countries do vary tariffs. Most importantly, we find evidence that applied tariffs of tariff lines that are bound are more likely to be decreased and less likely to be increased, and that this "taming" effect of the binding decreases with the level of the water (i.e. the gap between bound and applied tariff). This finding is robust to controlling for political economy determinants of tariffs and to factors related to the economic cycle.

Keywords: water in the tariff, weak commitments, tariff volatility, trade policy uncertainty, World Trade Organization, trade agreements.

JEL Classifications: F1.

[1] The views expressed in this paper are those of the authors only and do not represent the views or opinion of the WTO or its members. We thank Joelle Latina for valuable research assistance.

1. Introduction

Economic theory explains how a binding tariff commitment can be welfare enhancing if it reduces and binds the tariff that a government applies. Both the terms-of-trade and the commitment argument for the existence of a trade agreement generate this result. The former argument posits that in the absence of a trade agreement, a country may be tempted to manipulate its terms-of-trade (i.e. the price of its exports relative to that of its imports) in order to increase its national income at the expense of its trading partners. Trade agreements solve a terms-of-trade driven Prisoners' Dilemma between countries which allows them to cooperate rather than act unilaterally. Gains from binding tariffs to a certain level arise because under a trade agreement countries will choose the cooperative free trade equilibrium rather than the optimal positive tariff. The commitment approach stresses the role of economic and political commitment problems that governments face in setting trade policy. When setting trade policy, a government may be unable to make credible economic and/or political commitments to the private sector. Binding commitments can help the government solve time inconsistency problems associated with lack of credibility that would result into higher tariff rates in the absence of a trade agreement.

At the same time, there is a broad consensus among policy makers that bindings are valuable even when they do not entail any direct tariff reduction. While the main objective of the WTO, as stated in the preamble to the Marrakech Agreement, is the reduction of tariffs, parties seem to have recognized the importance of binding tariffs even when the binding does not entail any immediate reduction of the applied tariff. In the Uruguay Round, Members agreed that there should be a substantial increase in the scope of bindings, including bindings at ceiling levels. More precisely, 'credit' towards achieving the target of the negotiation was granted to developing Members for binding tariffs at ceiling levels sometimes far above the level of applied tariffs.[2] As a result, Members who chose to bind at ceiling levels ended up with a binding overhang or, in WTO parlance, with "water" in their tariffs, i.e. a wedge between their bound and applied tariffs. Since the Uruguay Round, more water has been added as Members unilaterally reduced their applied tariffs without binding the reductions. This binding overhang introduces a form of flexibility in WTO commitments.

Clearly in a world where trade policy is stochastic, by imposing an upper limit to the range of possible values that a random tariff may take, bindings reduce the mean and the volatility of trade policy. Measuring welfare in terms of a balance of trade function, Francois and Martin (2004) show that there is a positive welfare gain arising from the reduced volatility of tariffs both for the importing and the

[2] GATT Document MTN.GNG/MA/W/13 describes the chairman of the negotiating group on market access' guidelines on credit for tariff bindings.

exporting country. This implies that the common omission of the benefits arising from reduced uncertainty in trade policy from the studies that look at the impact of multilateral liberalization on welfare may lead to an underestimation of the gains. Whether these omitted gains are relevant is an empirical question. There are two parts to this question: one is how, and by how much introducing bindings reduces the variability of trade policy, the other one is what the welfare effects of lower variability are. The focus of this paper is on the first question.

The little existing empirical work on the effect of bindings uses indirect measures of trade policy variability such as the volatility of trade flows (rather than policy) (Rose, 2004, and Mansfield and Reinhardt, 2008) or the *ad valorem* equivalent of trade barriers on agricultural products (Francois and Martin, 2004, and Cadot, Olarreaga and Tschopp, 2008) to ask the question whether disciplines imposed by a trade agreement (be it the multilateral trading system or a regional agreement) dampen trade policy volatility by reducing trade policy discretion. However, both the volatility of trade flows and that of the *ad valorem* equivalents of trade barriers are affected by factors other than the mere variability of trade policy. For example, the *ad valorem* equivalents of specific duties may appear to change when prices change even though the specific duty applied by a country does not change.

This paper contributes to the existing literature on the impact of bindings on the volatility of trade policy by focusing on *direct* measures of trade policy variability: the mean and variance of tariffs and the probabilities of positive and negative tariff changes. We focus only on *ad valorem* tariffs (i.e. we exclude ad valorem equivalents of non ad valorem tariffs) to abstract from any factor other than a trade policy change that may affect our measures of the stability of trade policy.

Focussing on WTO commitments, we evaluate the role of bindings in reducing trade policy uncertainty in three steps. First of all, using tariff line information on bound and applied tariffs for the period 1996-2009 we measure the amount of water in the tariffs on the one hand and the variability of applied tariffs on the other hand. Second, we provide descriptive statistics on the relation between the binding status and various measures of tariff variability. What we are interested in is whether the presence of a binding, with or without water, affects the propensity of governments to change applied tariffs. Third, controlling for the political economy and economic cycles factors that determine the level of the tariff, we estimate the impact of binding status on the volatility of trade policy.

2. Review of the literature

A small number of recent theoretical contributions examine the economic rationale for weak tariff bindings, i.e. bindings that specify the maximal level at which a government commits to set its applied tariff (strong bindings would specify the precise level at which a government commits to set its applied tariff).[3] In those contributions, the value of bindings arises from the fact that they reduce the average tariff. The bindings may change the variance of tariffs but the models make no strong predictions regarding how this will affect welfare.

Bagwell and Staiger (2005) and Bagwell (2009) consider a situation where governments are uncertain about the political pressure that they will face in the future when they design a self-enforcing trade agreement. This means that they don't know with certainty the tariff levels that will be efficient from their joint perspective in the future. The model further assumes that political pressure is not publicly observable, which implies that governments cannot design a state-contingent agreement. In this setting, an agreement to use a weak binding offers governments greater expected joint welfare than they can achieve with an agreement to use a strong binding or in the absence of an agreement. This is because a weak binding on tariffs can be set such that it limits the extent to which governments can impose terms of trade externalities while at the same time allowing downwards discretion and thereby making it possible for governments to set their applied tariffs at a level that better matches the amount of political pressure. The model also allows to explain why there can be water in the tariffs. A government which is subject to low political pressure applies its optimal tariff, which is strictly below the bound rate. Bagwell (2009), however, argues that a government may be reluctant to use downwards discretion and apply a tariff below the optimal weak binding as it may reveal that it faces little political pressure and thus that it would be unlikely to retaliate if its trading partner cheats on the agreement.

In a recent paper, Horn et al. (2010) propose a related economic rationale for weak bindings. In their explanation, the optimal trade agreement may include rigid weak bindings because of the presence of contracting costs, and not because governments observe political pressure privately. Weak bindings are appealing because they combine rigidity and discretion in the sense that the ceiling does not depend on the state of the world, and the government has discretion to set its tariff below the ceiling. Maggi and Rodriguez-Clare (2007) on the other hand propose a different explanation where

[3] Weak bindings (i.e. maximum tariff rates) are explained in a context of self-enforcing trade agreements and private information by Bagwell and Staiger (2005) and Bagwell (2009) and as a result of contract incompleteness by Horn, Maggi and Staiger (2010). Maggi and Rodriguez-Clare (2007) on the other hand propose a different explanation where governments choose weak bindings because they induce lobbies to pay contributions even after a trade agreement is signed.

governments choose weak bindings because they induce lobbies to pay contributions even after a trade agreement is signed.

In the trade policy debate it is often argued that the binding of tariffs, even at or above the level of the corresponding applied rate, increases the stability of tariffs and reduces the uncertainty confronting exporters regarding trade policy. There is, however, relatively little theoretical work on this topic. The implications of random tariff regimes remain largely unexplored. Economists have given little attention so far to the quantification of the benefits of tariff bindings or other commitments in the context of time-varying underlying protection processes.

Francois and Martin (2004) is the only paper to our knowledge that proposes an approach to measuring the effect of tariff bindings on the cost of protection that takes into account their impact on the stability of market access.[4] To examine the liberalization of randomly varying protection, they develop a conceptual framework based on the expected cost of protection and show that this cost rises with the square of the mean and the standard deviation of the rate of protection. Using this analytical approach, they show that there are welfare gains from bindings due to both lower average tariffs and less volatile trade policy.

A more recent contribution by Sala et al. (2010) explains how bound tariff reductions can create market access even in the presence of a significant overhang. Recognizing that tariff bindings above applied rates cannot generate market access via the intensive margin of trade, they argue that such bindings may instead affect the decision of firms to enter export markets, i.e. they may generate market access via the extensive margin. The reasoning is that tariff bindings reduce the risk that exporters face and that this alters the expected profit flows on export markets and thereby affects the entry calculation of potential exporters. The role of bindings is especially important for risky destinations, for which even a high binding overhang may provide substantial market access.

The empirical literature that has looked at the impact of binding on the stability of trade policy is very limited. Rose (2004) and Mansfiled and Reinhardt (2007) have focused on trade flows as variable of interest and explored the impact of the WTO and regional trade agreements, respectively, on the stability of trade policy. Relying on the assumption that tariff bindings reduce the risk of trade policy reversals, Handley (2011) shows that tariff bindings increase entry into a foreign market even when the level of applied protection remains unchanged.

[4] Stahl and Turunen-Red (1995) show that the uncertain future can create an incentive for trade agreements: since payoffs of all players are subject to political changes, trade agreements that limit policy variations can provide long-run gains.

Francois and Martin (2004) and Cadot, Olarreaga and Tschopp (2008) have analysed the impact of WTO, the former, and both WTO and RTAs the latter on the *ad valorem* equivalent of tariff protection and focused on agricultural products. In particular, Francois and Martin (2004) look at the impact of the WTO agricultural agreement on the protection of wheat in seven OECD countries. The authors chose this case because they had access to annual *ad valorem* equivalents of trade barriers for agricultural products for the period 1979-1993 in those countries, and Uruguay Round tariff bindings on wheat were typically set at levels substantially higher than the average rates of protection applied prior to the Round.[5] Their results show relatively large estimated reductions in the cost of protection resulting from the binding despite the level at which it was set. In the case of the EU, roughly one half of the gains is derived from the reduction in variability alone, with the other half derived from the reduction in the average rate of protection.

Cadot, Olarreaga and Tschopp (2008) explore the effect of regional trade agreements (RTAs) and the WTO on the volatility of barriers to agricultural trade measured as the *ad valorem* equivalent of the wedge between domestic and world prices. Using an instrumental variable approach to correct for the endogeneity of RTAs, they find that both participation to RTA and the WTO agricultural agreement reduce agricultural trade policy volatility, although the effect of the WTO is not robustly significant.

However, both volatility of trade flows and price distortions on the agricultural products are not direct measures of trade policy variability. To our knowledge, our study is the first empirical paper that attempts to establish whether there is a stability effect induced by bindings looking directly at a trade policy variable: *ad valorem* tariff.

3. Bindings, "water", and tariff changes: a descriptive statistics approach

(a) Data

To perform our analysis, we use two databases on bound, respectively applied tariffs matched at the six-digits heading level of the HS nomenclature for the period 1996 to 2009 and only consider *ad valorem* tariff lines. The applied tariff database includes data from the WTO-IDB and the UNCTAD –TRAINS database. For the bound tariffs, we use the CTS database. The MTN database allows us to account for the exact date from which the implementation of a commitment start, thus avoiding that analysis may fail to find a significant impact of binding on the volatility of trade policy simply

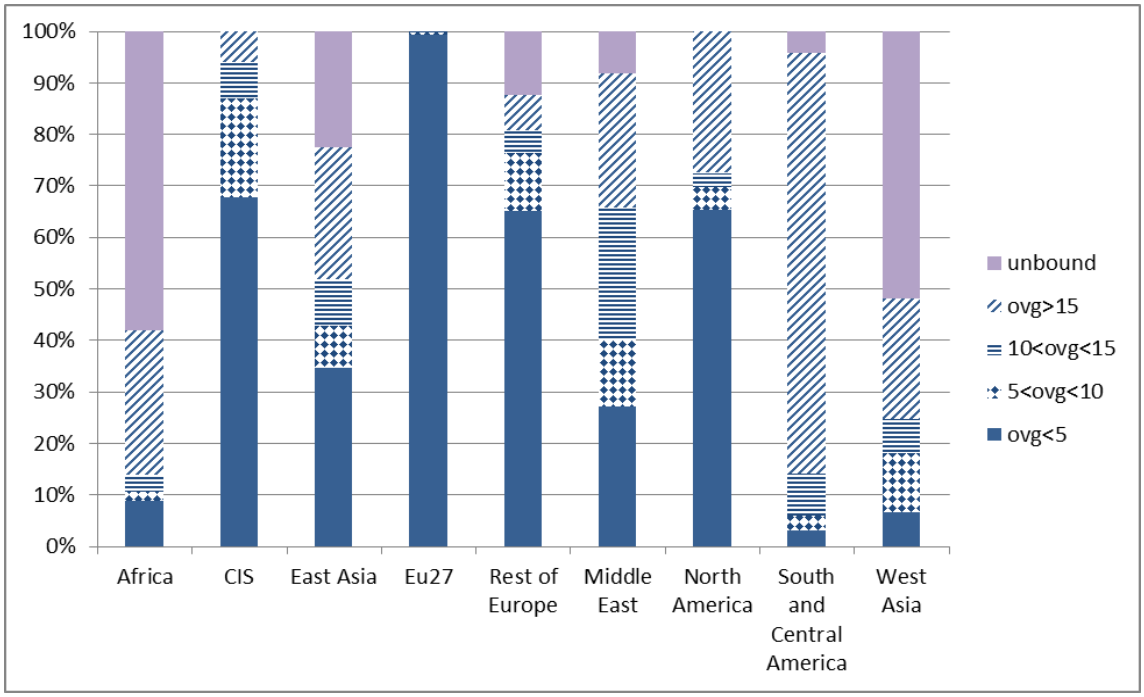
[5] The case of wheat is rather specific because the variability of *ad valorem* equivalents of non *ad valorem* rates is typically much higher given the variability of the prices used in their computation than that of *ad valorem* tariff rates.

because for some tariff lines the date of implementation of commitments may not coincide with the date of entry into the WTO. In particular, we consider tariffs lines unbound in the period between a country's accession to the WTO and the beginning of the implementation period, and bound in the period of implementation. Available data at this level of disaggregation presents numerous gaps. The number of countries in the sample varies across years from 24 to 97, when the total number of countries across all years for which data are available is 119.

(b) How much "water" and where?

Both the coverage of tariff bindings and the overhang between bound and applied tariffs differ considerably between countries and regions.[6] Figure 1 shows the shares of bound lines and unbound lines by region. Bound lines are also differentiated depending on the level of the water in the tariff. The figure shows that there is a significant amount of water in the tariffs. Interestingly, in most of the developing world, 70 to 90 percent of the tariffs could be raised by 15 percentage points or more without violating WTO commitments.

Figure 1: **Share of bound and unbound tariff lines, by region and level of water**

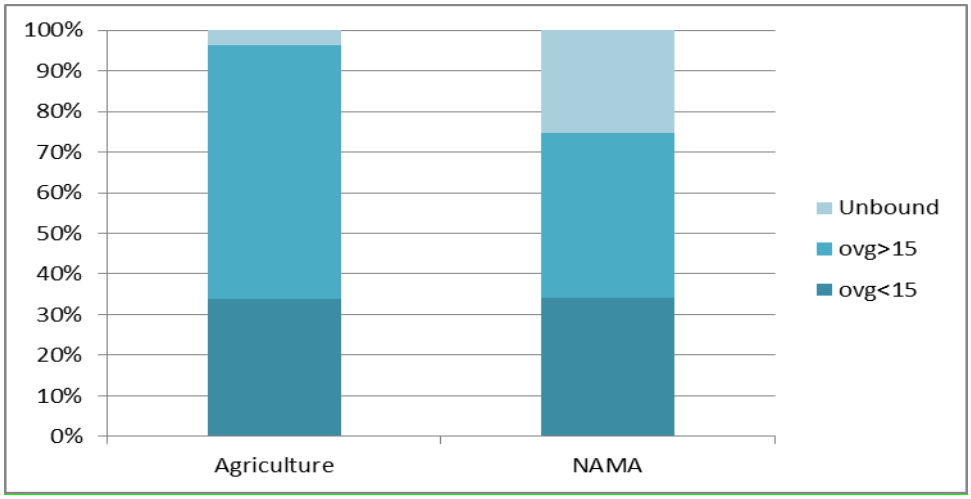


Note: Ovg denotes the level of tariff overhang.The shares of bound rates are calculated as the number of fully bound *ad valorem* 6-digit subheadings divided by the total number of 6-digit subheadings, excluding non ad valorem and partially bound lines.

[6] See WTO et al. (2008) for detailed country tariff profiles.

At the sectoral level, virtually all tariffs on agricultural products are bound, while the binding coverage can be lower for non-agricultural products. However, when the overhang is taken into account, the percentage of tariff lines with a level of water below 15 percentage points is relatively evenly distributed across product categories.

Figure 2**:** **Share of bound and unbound lines by product**.



Note: Ovg denotes the level of tariff overhang.

To sum up, our data show that the margin of manoeuvre available to certain governments, especially developing countries, to raise their tariffs is considerable. In addition, there is a significant margin of manoeuvre in both agriculture and non-agricultural products.

(c) How do tariffs change over time?

Table 1 (Columns 1 to 3) shows the number of countries in the sample and the number of countries that have changed the level of the applied tariff in at least one tariff line over the relevant period. Typically, each year between two thirds and three quarters of all countries in the sample appear to change at least one tariff.

Columns 4 to 6 show the number of tariff lines for which tariff information is available and the number of tariff lines for which a change in the level of the tariff is recorded. For instance, in the period 2006-2007, out of a total of almost 470'000 about 42,000, that is approximately 10 per cent of tariff lines, were changed. It is also interesting to note that the number of tariff reductions exceeded the number of tariff increases for all periods. The only exception is the period 2007-2008, signing the beginning of the crisis, where the number of increases was larger.

Table 1: **Positive and negative tariff changes, 1996-2009**

	Number of countries			Number of tariff lines			Mean		Standard Deviation	
	total	with dt>0	with dt<0	total	with dt>0	with dt<0	(dt>0)	(dt<0)	(dt>0)	(dt<0)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1996-1997	32	21	20	154,228	2,825	25,771	3.778	-4.152	8.921	6.365
1997-1998	39	26	29	190,430	18,550	34,858	3.196	-2.463	2.627	3.882
1998-1999	45	35	35	217,479	27,135	43,414	4.817	-3.715	5.767	15.238
1999-2000	64	51	49	278,945	16,184	53,897	6.778	-6.525	23.257	9.887
2000-2001	74	60	64	343,812	13,899	55,164	5.289	-3.683	11.826	6.496
2001-2002	94	75	75	462,347	16,107	67,962	9.655	-3.479	12.498	5.664
2002-2003	85	52	62	422,660	13,098	56,780	4.232	-4.347	5.105	5.719
2003-2004	73	59	61	361,550	14,606	33,490	3.759	-3.893	13.496	5.315
2004-2005	79	61	67	391,720	14,209	52,396	7.729	-5.270	7.121	7.452
2005-2006	89	63	73	443,059	8,232	21,003	4.990	-6.492	6.658	7.310
2006-2007	97	69	76	468,425	10,295	31,542	6.349	-4.573	7.450	4.561
2007-2008	73	45	60	345,897	10,549	10,214	5.094	-4.159	4.485	5.338
2008-2009	24	12	14	111,863	689	13,147	3.763	-3.658	2.376	3.309

Note: dt is defined as the difference between the tariff at time t and at time t-1.

The average increases and average decreases appear to be approximately in the same order of magnitude, ranging between 2.5 and 10 percentage points on average (columns 7 and 8). But, figures for the standard deviations show a significant variability in the size of tariff changes (columns 9 and 10).

In sum, evidence shows that tariffs do change in both directions, some are raised and some are lowered. It also shows that tariff increases are not necessarily large – yearly average increases never reach two digits- but they can be significant at times as the relatively large standard deviation attests. In the rest of the paper we examine how the binding status of tariff lines, taking into account the "depth of the water" between the bound and the applied rate, affects the behaviour of applied tariffs.

(d) How do bindings affect the behaviour of applied tariffs?

Having examined the binding status of tariff lines and the changes in tariffs, we matched the two datasets and considered how the existence of a binding affects the behaviour of tariffs. Economic theory suggests that countries adjust their tariffs to match time varying political pressure and that they prefer "weak" bindings because they allow them to reduce the average tariff while at the same time facilitating improved downward matching. In a simple framework where tariffs respond to normally distributed political shocks the imposition of a binding cuts the distribution of possible tariff rates, thus reducing the average and the variability of the tariff. We therefore, first calculate the average tariff rate and its variability over the whole sample period for which we have information. As it was to be expected, the average tariff for bound lines is lower than for unbound lines and this is true for all

values of the overhang (Table 2, column 1). Somewhat surprisingly, however, we also find that the variability of tariff rates (as measured by the coefficient of variations) is on average higher for bound lines (Table 2, columns 2).

In columns 3 and 4 of Table 2, we have calculated the probability of an increase and the probability of a decrease in the tariff rates. For bound tariffs, the probability of decrease is significantly higher than the probability of increase. This pattern is particularly pronounced for tariff lines with a low level of water. When the overhang is between 5 and 30 percentage points the probability that the applied tariff rate is reduced is 2 to 3 times higher than the probability that it is increased. On average, for tariff lines with a tariff overhang below 30 percentage points the probability of a fall in the tariff is nearly 4 times higher than the probability of an increase.

Table 2 also suggests that when the level of the water is high (above 30 percentage points) the "taming" effect of the binding is largely lost.

Table 2: **Mean and standard deviation of tariff and probability of increases**

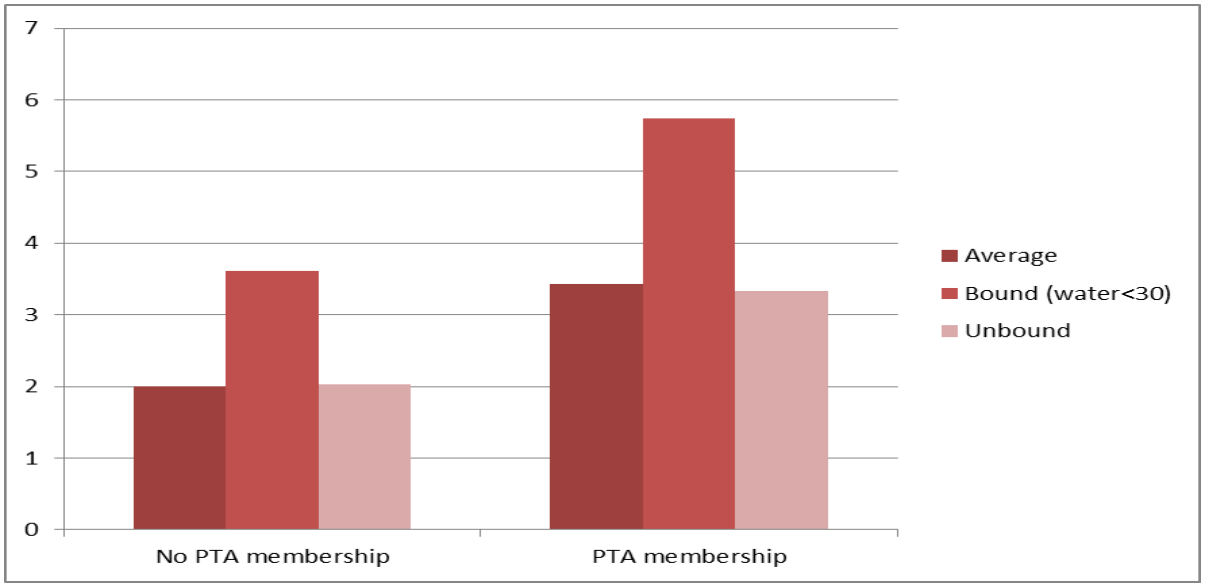
		Mean(t)	Coeff. Of Variation (t)	prb(dt>0)	prb(dt<0)
Bound lines	all	9.494	2.047	4.066	12.671
Water range	*<5*	7.924	4.114	1.422	17.480
	5 to 10	8.070	1.274	4.474	10.391
	10 to 20	10.406	0.790	4.561	15.971
	20 to 30	10.216	0.846	7.356	14.465
	30 to 40	8.393	0.902	5.316	6.466
	>40	8.483	2.037	4.500	5.212
Unbound lines	all	11.381	1.106	3.636	9.340

Overall, this evidence is consistent with the idea that setting a binding, even with an overhang, provides a "signal" that the government is committed to liberalize a certain tariff line, or at the least with the hypothesis that setting a binding is per se a form of market access, as it reduces the risk for exporters in the market to face higher barriers to entry sometime in the future. As stressed by Sala et al. (2010), to the extent that entering a foreign market entails the payment of fixed costs, the risk of an increase in the tariff implies a reduction in the expected profits and therefore a de facto barrier to entry in that market.

This finding is robust to controlling for the influence of PTAs. In general data show that PTA membership reduces the probability of a tariff increase and increases the probability of a tariff reduction. That is, there appear to be a complementarity between PTAs and multilateral commitments

in terms of certainty of commitment to liberalize.[7] However, as Figure 3 shows, the probability of a tariff reduction relatively to that of a tariff increase in bound lines remains above that of unbound lines even in countries that are no members of any PTA.

Figure 3**: Probabilty of a tariff reduction relative to a tariff increase**



4. The value of bindings: an econometric analysis

In this section we test the hypothesis that binding a certain tariff line has a value because it reduces the risk that exporters face a worsening of market access conditions, after they have paid the fixed cost to enter a new market. Relying on the Grossman and Helpman (1994) model of "protection for sale" to identify the structural determinants of protection, we estimate the probability of a tariff increase and of a tariff decrease using a Logit model. In particular, we model the probability of a tariff increase as a function of the economic cycle, political economy factors and the binding status of the tariff line.

[7] This result is in line with the recent finding by Esteovadeordal, Freund and Ornelas (2008) that preferential tariff reduction in a given sector leads to a reduction in the external (MFN) tariff in that sector.

The equations we estimate are:

$$P(dt>0)_{iht} = \alpha_0 + \alpha_1 \, Binding_{iht} + \alpha_2 \, WaterLag_{iht} + \alpha_3 \, PTA_{it} + (political\ economy\ controls) + (other\ controls) + \varepsilon_{iht}$$

and

$$P(dt<0)_{iht} = \beta_0 + \beta_1 \, Binding_{iht} + \beta_2 \, WaterLag_{iht} + \beta_3 \, PTA_{it} + (political\ economy\ controls) + (other\ controls) + \eta_{iht}$$

where *Binding* is a dummy equal to 1 if the tariff line is bound and zero otherwise, *WaterLag* denotes the level of the water in the previous year, and *PTA* is a dummy that denotes whether the country is member of a PTA. *Political economy control variables* are a set of standard controls used to capture sector specific lobbying pressures.[8] These are variables apt to measure the size of the sector, such as the number of employees and the sectoral output, and an indicator of the toughness of competition, namely the number of establishments in the sector.[9] In the set of *other controls* we include variables that capture the economic cycles, such as GDP growth and import growth. We also control for the lagged value of the applied tariff. We use the same specification to estimate the probability of a tariff reduction.

We expect that the probability of tariff increases is reduced by the presence of a binding, while the probability of a tariff decrease is enhanced when a certain tariff line is bound. The argument is that if binding signals commitment to a more stable policy, the reputation cost of a tariff increase is higher when a certain line is bound. The stabilizing effect of a binding is quite obvious in the absence of water. However, we expect a stabilizing effect for bindings with water as well, when a binding has the role to signal the willingness to commit to a more stable trade policy. For this reason we also control for the level of the water in the tariff and we expect that tariffs are more likely to increase when the level of the water is high.

We also expect that the probability of a tariff increase (decrease) augments (falls) in periods of downturns or when foreign competition increases, as governments are under pressure to isolate the domestic sector from foreign competition. Similarly, we expect tariff increases to be more likely when a sector is characterised by stronger lobbies. Finally, we expect the initial level of the tariff to be negatively related to the probability of a further tariff increase, as it indicates that the sector already receives a high level of protection.

[8] See, for example, Bown and Tovar (2011).

[9] Production data at the 3 digit ISIC level are obtained from the World Bank's *Trade and Production Database* (Nicita and Olarreaga, 2007) and converted to HS classification.

Table 3**: Probability to increase or reduce tariffs, Logit estimates on a panel data set over the period 1996-2009**

Tariff Increases			Tariff Reductions		
Bindings	-2.119*	-3.486***	Bindings	2.335*	0.351
	0.856	0.875		1.001	1.005
corrected water lag	0.028***	0.011***	corrected water lag	-0.028***	-0.030***
	0.001	0.002		0.001	0.001
PTA		-4.407***	PTA		2.197***
		0.185			0.03
Import value	0.000***	0.000***	Import value	0	0
	0	0		0	0
Import value growth	0	0	Import value growth	0	-0.000**
	0	0		0	0
GDP	-0.000***	-0.000***	GDP	0.000***	0.000***
	0	0		0	0
GDP growth	-11.101***	-10.399***	GDP growth	2.226***	2.877***
	0.195	0.198		0.062	0.072
N of employees growth	-1.085***	-1.239***	N of employees growth	1.394***	1.462***
	0.136	0.143		0.057	0.057
Output growth	-0.539***	-0.671***	Output growth	-0.853***	-0.934***
	0.083	0.092		0.034	0.035
N of establishments growth	5.709***	5.842***	N of establishments growth	2.005***	1.788***
	0.176	0.177		0.058	0.06
N of employees	0.000***	0.000***	N of employees	0.000***	0.000***
	0	0		0	0
Output	0.000***	0	Output	-0.000***	-0.000***
	0	0		0	0
N of establishments	-0.000***	-0.000***	N of establishments	-0.000***	-0.000***
	0	0		0	0
1st lag of applied tariff rate	-0.010**	-0.026***	1st lag of applied tariff rate	0.083***	0.083***
	0.004	0.004		0.001	0.001
Log Likelihood	-8537.41	-8253.28	Log Likelihood	-81000	-76900
N of obs.	113000	113000	N of obs.	205000	205000
Year FE	yes	yes	Year FE	yes	yes

Note: Water lag is the level of the water lagged one year. In order to keep unbound lines in the regressions, we have assigned a value equal to 80 as the level of the water for unbound lines.

Table 3 presents the results of our regressions. All variables have the expected sings. The probability to increase the tariff is lower when the tariffs are bound, while the probability of reducing a tariff is higher for bound tariff lines. The results obtained for the political economy determinants of the tariffs are broadly consistent with the theory: the larger a sector (in terms of output) is the higher the likelihood of a tariff increase, the stronger is the increase in competition (in terms of number of establishments) and the less successful a sector (in terms of output growth) the more likely is an increase in the level of protection. Indeed it is to be expected that in these circumstances lobby pressure for protection are stronger.

5. Conclusions

One of the stated goals of the multilateral trading system is to enhance the stability and predictability of the environment in which traders operate. Binding tariffs at the WTO reduces the scope for their discretionary use. But, tariffs have been bound by developing countries at levels substantially above their applied rate. Therefore, whether the ceiling rate at which country have committed at the WTO is sufficient to diminish trade policy volatility is an empirical question.

The existing literature addressing the question of whether WTO commitments are effective in reducing trade policy volatility has so far looked at measures of trade policy volatility, such as trade flows or price distortions, that only indirectly measure actual changes of trade policy and can be affected by other factors. We overcome this limitation by looking directly at tariff changes.

Using a recently built database on applied tariffs covering over 100 countries for the period 1996 to 2009 including both agricultural and non-agricultural products, we find evidence that countries do use their policy space. Most importantly, we find evidence that applied tariffs of tariff lines that are bound are more likely to be decreased than increased. This finding is robust to controlling for political economy determinants of the tariff and to factors related to the economic cycle.

Although the analysis of this paper does not allow to establish the channels through which the binding status of a certain tariff line affects the probability that the applied tariff is raised or lowered, it highlights a very interesting empirical regularity: that is that bindings, even if above the applied tariff rate, work as a form of market access. That would be the case if they reduce the risk faced by exporters that conditions of access to a certain market will deteriorate after they have paid the fixed cost to enter.

6. References

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