

MIGHT PERSEVERES OVER RIGHT?

ECONOMIC POWER IN THE WTO DISPUTE SETTLEMENT SYSTEM

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Abstract:

In this paper we study if the Dispute Settlement Procedure (DSP) is harmful to developing countries and, if this the case, why is it due to? We are interested on the impact of economic variables in the WTO Dispute Settlement Procedure, particularly how this variables influence the bargaining-power of big and small countries (or developed/developing countries) in the process of the DSP. In addition, we found several ways to measure the impact of economic determinants in the pre-settlements negotiation and litigation power of the countries such as market size or exports. Finally, we try to demonstrate if the dispute settlement procedure reforms during the WTO have introduced a set of rules that benefits developing countries. That is, if these measures could compensate the power gap between countries.

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1. Introduction²

In this paper we study if the Dispute Settlement Procedure (DSP) is harmful to developing countries and, if this the case, why is it due to? We are interested on the impact of economic variables in the WTO Dispute Settlement Procedure, particularly how this variables influence the bargaining-power of big and small countries (or developed/developing countries) in the process of the DSP. Furthermore, we found several ways to measure the impact of economic determinants in the pre-settlements negotiation and litigation power of the countries such as market size or exports.

Since the creation of the Dispute Settlement Procedure some authors have tried to explain why developing countries make scant use of DSP. Since the Dispute Settlement Procedure has been created with the 1979 *Understanding on Dispute Settlement*, researchers have argued that in this process prevails the "power of politics" being advantageous to most developed countries with a strong diplomatic power (Kuruwila, 1997). The DSP was born with a lot of lacks 'cause of an inconsistent set of rules in which the "might perseveres over right" (Lacarte-Muro and Gappah, 2000: 401). Progressively, the system has suffered reforms to constitute a more legalistic process which compensates the lack of power of developing countries with a well-established set of rules. These reforms were in 1989 with the *Dispute Settlement Procedures Improvements*, making notable reforms like the stricter timelines on proceedings, the right to a Panel, automatic adoption of reports, etc. These reforms theoretically enforce the rule system of dispute settlement and are expected to promote errant defendants to liberalize in a timely manner, and to encourage developing countries to bring more cases to the WTO than they did to GATT.

This research tries to explain why the Dispute Settlement is more beneficial to developed countries than developing ones, introducing a set of economic variables which denote how the power-based relationships between countries, mainly economic power, could be determinant in the outcomes of the dispute process. Furthermore, we try to demonstrate if the dispute settlement procedure reforms during the WTO have introduced a set of rules that benefits developing countries. That is, if these measures

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could compensate the power gap between countries, as Busch and Reinhardt emphasize in their studies: "The problem is that these reforms have also raised the transaction costs of settling disputes (...) The new premium on legal capacity under the DSU is likely less burdensome for most of the advanced industrial states, which generally maintain large, dedicated, permanent legal and economic staffs tasked with WTO and trade law matters. (...) For developing countries, in particular, this bodes especially poorly for early settlement of a dispute" (Busch and Reinhardt, 2003: 721)

This last paragraph illustrates our starting point. We agree with this affirmation about the weakness of the developing/small countries; however we do not agree with authors when they claim that the new dispute system substitutes the traditional source of weakness (market size and retaliation measures) for legal capacity. The question in this paper, then, is how the economic dynamics, despite the improvements to compensate the power gap, continue influencing the in the WTO's Dispute Settlement Process outcomes.

The paper is organized as follows: in the next section we review an important piece of the literature on WTO's Dispute Settlement Procedure. In the third section we explore the theoretical approaches focused on explanations of what determines the outcomes in the International Organizations. The fourth section describes the data and variables. Next section, we resume the hypothesis and explain the political-economic model of the WTO's Dispute Settlement Procedure's concessions. Finally I address the empirical results, closing the paper with the conclusions.

2. Literature review

Academics of international political economy are increasingly analyzing various aspects of the dispute settlement procedure in the international trade institutions such as WTO. The literature about the WTO's DSP is developed in two mainstreams. The first one, are the works on dispute initiation dealing with two main questions: which countries choose to file disputes as complainants and which countries are targeted as defendants. For a broader explanation of the literature review of the phenomenon of the dispute initiation, we recommend the enumeration made by M. Kim in his work *Unequal Law: Procedural Costs of WTO Rules on Developing Countries* (Kim, 2006). An example is the

Bown's research about which countries initiate this process and with which expectations. The results confirm that an exporter is more likely to participate in dispute in which it is bilaterally powerful (with respect to the respondent) because this positively affects the probability of a successful economic outcome (Bown, 2004b).

The second one, are the studies based on the explanations for dispute settlement outcomes. Based on this underlying idea, the explanations for dispute settlement outcomes break down into two of the three categories mentioned above, country characteristics and institutional characteristics. We will focus on the implications of former factors. However, are considerably relevant the Busch and Reinhardt's arguments about the influence of institutional characteristics as the highlight of the early settlement stage to extract the best concessionary outcome (Busch and Reinhardt, 2000). Moreover, in a posterior study, they argue that the legalization in the WTO has raised the transaction cost of settling disputes by reason of the complexity of the process. Also, M. Kim has argued that "the changes in the dispute settlement procedure from the GATT to the WTO have decreased the likelihood of developing countries utilizing the procedure under the WTO, compared to the likelihood under the GATT" (Kim, 2006:38).

Therefore, an important remark is that these institutional factors can interact with the countries' characteristics that define the economic power. It is necessary to take this into account when analyzing the level of concessions.

Characteristics of the Country:

This is a question that Marc Busch and Eric Reinhardt (2003), following Hudec's conceptualization, examine focusing on the level of outcomes. The fundamental notion in Busch and Reinhardt's argument is that most interesting outcomes take place outside the formal mechanism of the GATT/WTO dispute settlement procedures, in which a panel makes a ruling. "Like dispute settlement under GATT, the success of the WTO system hangs on its ability to encourage bargaining in the shadow of weak law" (Busch and Reinhardt, 2000: 160).

Furthermore, M. Busch (Busch, 2000) proves the regime type argument about concessions under the GATT disputes. M. Busch argues that highly democratic dyads are more likely to make concessions, but only in the consultation stage. Moreover, "Pairs of

democracy realize greater concessions in the consultation stage where there is less of a paper trail, facilitating deals that might otherwise be politically costly with respect to domestic and foreign audiences” (Busch, 2000: 442).

Another country characteristic which Busch and Reinhardt focus on is the legal capacity. Because of the reforms which drive the WTO’s DSP to a more legalist process, the legal capacity have increased its relevance in the concessions. Whereas advanced industrial states “generally maintain large, dedicated, permanent legal and economic staffs tasked with WTO and trade law matters” (Busch and Reinhardt, 2003: 721) the same is not true for poorer countries. Therefore, the small countries require more assistance in the lead up to a case, concretely in the early settlement (Busch and Reinhardt, 2003: 732-733). In addition, the legalization of the DSP has turn out more complexes the judicial process, benefiting countries with more legal capacity and used to litigate, meanwhile developing countries will fail to benefit due to their lack of capacity, despite the legal assistance of the WTO.

Reinhart and Busch have found interesting empirical results; poorer countries have not secured significantly greater concessions under the WTO than under GATT. Although, the DSP has facilitated more favorable outcomes for wealthier complainants, except in the special climate of US-EC disputes (Busch and Reinhardt, 2003: 720). This gap is consequence of their lack of legal capacity, not a lack of market power with which to threaten retaliation, concluding that developing countries need more assistance during the early settlement (Busch and Reinhardt, 2000) before litigation commences with Panels or the Appellate Body.

Nevertheless, the intention of my study is to test if in DSP still remains disadvantageous to small countries due to more favorable outcomes for wealthier complainants. In this case, we try to complement the claim that the gap of the number of concessions between developing and developed countries is a consequence of their lack of legal capacity. My consideration is that the economic power could still be determinant in the level of concessions in the DSP. Despite of developing countries were especially ill-served by GATT’s diplomacy, as well are better balanced to benefit form the WTO’s more legalistic architecture that encourage to developing countries to ruling procedure, the menace of economic power is still manifest.

3. Theory

As regard to the theory of the judicial bargaining power at the WTO Dispute Settlement Procedure, we have to consider two meta-theoretical traditions that help us to conceptualize bargaining and outcomes in International Organizations as GATT/WTO. These two traditions are called by R. Steinberg like the "bargaining in the shadow of law" and "bargaining in the shadow of power" (Steinberg, 2002, spring). These two traditions usually could be both considered as antagonistic or combined. For this study, we consider the importance of both approaches.

The first approach, the law-based approach, considers that bargaining power in international organizations is derived from substantive and procedural legal endowments. Then, decision-making rules determine voting or agenda-setting power, which shapes outcomes (Steinberg, 2002, spring: 342). The second approach, consider legislative bargaining and outcomes in international organizations as a function of interests and power (Steinberg, 2002, spring: 346).

At the DSP's literature we have look upon to literature referred to both international approaches, the rationalist (law-based outcomes) and the realist (power-based outcomes). The former view considers the importance of international institutions and rules in the outcomes. Busch and Reinhardt's considerations about the influence of institutional characteristics use this analysis when they explain how the early settlement stage weights the outcome (Busch and Reinhardt, 2000). Furthermore, the explanation about the consequences of the empowerment of the legalization in the WTO which raises the complexity of the process consider the same points of the law-based outcomes. But these studies enlighten the weak points of this approach when they remark that the rules instituted with the intention to make available weak countries to block any state worse off or with inequitable distribution of benefits. We recognize the normative role of this approach and his utility in any aspects of International Organizations, but, both legislative and judicial outcomes are still configured by the bargaining-power of the states.

The second tradition, the realist, focused on the power of the single states to determine the effects under the negotiation process and dispute settlement. For instance,

the implications of these theories assume that larger national economies have better internal trade possibilities than smaller national economies. These theories that used to measure bargaining power by market size have been implemented by other theories of regulation. One of these views implementations was offered by D. Drezner who opens the scope of the bargaining power, in this case focusing on concretely on the economic power, in detriment of other such as geographical, political, etc. refusing the influence of institutional factors which can alter the relations of power.

This view understand GATT/WTO as "a rules-based institution whereby, prior to negotiating over trade policy, member governments agree to a set of rules or principles which describe the limits of acceptable behavior and thereby govern the bargaining chips that can be brought to the actual trade-policy negotiations that follow, where the two pillars of his international organization are the principles of reciprocity and nondiscrimination" (Bagwell and Staiger, 1999, march: 216). But, indeed while generating consensus that apparently benefits each member, the powerful states may contract asymmetrically for outcomes that are skewed in their favor. Weaker states may be coerced by powerful states to support of measures, included this cases that are Pareto-improving, but, at the end, with benefits distributed in favor of the latter. To sum up, these models denied the implications that are based on the sovereign equality of states. "That is why the WTO sovereign equality decision-making rules and processes help generate crucial information for powerful states to use in the invisible weighting process, and have helped legitimize WTO bargaining and outcomes for domestic audiences. Instead of generating a pattern of Pareto-improving outcomes deemed equitable by all states, WTO sovereign equality decision-making rules may be combined with invisible weighting to produce an asymmetric distribution of outcomes of trade rounds" (Steinberg, 2002, spring: 365).

At that time, we propose to test the implications of both theories, trying to explain the outcomes of the WTO's Dispute Settlement System by the effect of economic differences between parties, introducing in this case variables which represent **economic power**, in conjunction with institutional variables. Then, in this intermediary approach we assert that state used the size of a government's internal market in international regulatory regime to extract regulatory benefits. However, this state's power is not the unique factor that determines the outcomes in the negotiations inside the Global

governance institutions. Also, **international institutions** shape the preferences and constraint the bargaining power of their members instituting rules, compromises, etc. From our point of view, this bargaining power approaches are useful, not only to explain the production of multilateral agreements such as trade agreements in the WTO, it could also serve to explain the judicial regulatory outcomes of the Dispute Settlement Procedure.

To assume this last affirmation, firstly, we have to say that this trade resolution process works like a regulation process as a result of several implications. On the one hand, this procedure is viewed like an alternative way of regulation when the WTO's negotiation rounds are stopped. In our days, trade liberalization by WTO is more difficult than in earlier period, more than ever developing countries have more information in hand and can organize better than before against powerful countries (Mansfield and Reinhardt, 2003, fall). When it occurs, the evidence analyzed by J. Goldstein and R. Steinberg, shows us that the conflicts grow and, consequently, the Dispute Settlement Process has increased his functionality. On the other hand, the new process enforced with the move to legalization has instituted a WTO dispute resolution "lead to expansive judicial law-making" (Goldstein and Steinberg, 2006: 31).

Nevertheless, this change in the legal structure of the procedure has not checked the independence of dispute system, "to the extent that it is performed effectively, the judicial function helps reinforce political support for the WTO by powerful countries" (Goldstein and Steinberg, 2006: 32), forcing an *economic liberalization by judicial law-making*. The WTO dispute settlement process offer an alternative to negotiated regulation with a potential for liberalizing sub-sectors that could not be opened through traditional trade negotiations. "As judicial liberalization peels off and defeats protectionist sectors, it may be easier to agree to negotiated liberalization. In this way, judicial liberalization may feed back onto negotiated liberalization" (Mansfield and Reinhardt, 2003, fall: 35).

Secondly, by reason of this alternative regulation process benefits to most powerful countries, is necessary to determine bargaining power in the Dispute Settlement System. For that definition of variables we will assume, how we said before, that governments with sufficient market size can influence the regulation of globalization

through the use of **market power** and **coercive power.**”

Then, we define **power** “as the relative size and diversity of an actor’s internal market”. Market size is typical measure of the economic power of a country in the International Political Economy studies. Related with the first concept of the definition, *size*, the effect is that the larger (and closer) the economy, the stronger the pull for producers to secure and exploit market access. In the same way, we added another parameter to measure the economic power as the diversity of a state’s economy, that is, trade openness. The *diversity* of a “state’s economy determines how vulnerable it is to becoming asymmetrically interdependent on other actors. The more diverse the variety of goods produced and consumed in the national market, the less vulnerable the state is to external pressure” (Drezner, 2007: 34). Then, we can conclude that an economic great power is that country where both its market size and economic diversity are unquestioned.

So therefore, to create a slight economic model that aims us to understand the impact of bargaining economic power of each country, we assume the next model to compare the bargaining power of the WTO’s members. The function relating a country’s characteristics to economic power is given by:

$$y_{i,t} = \alpha + \beta_1 \text{GDP}_{i,t-1} + \beta_2 \text{GDP per capita}_{i,t-1} + \beta_3 \text{Trade}_{i,t-1} + \varepsilon_{i,t}$$

The dependant variable is the economic power of country *i* in year *t*. The measures are (1) the natural log of the GPD, (2) the natural log of the GDP per capita (3) the percentage of GDP share by trade. This latter is divided for more detail in the analysis of total exports and total imports as percent of GDP.

Nevertheless, we also included institutional variables which constraint and conform the actions and preferences of actors in regulatory disputes settlement in WTO. In these case we adopt Busch & Reinhardt’s model about the institutional, concretely legal variables that constraints the economic power of state to create an equal sovereignty trade system.

We need also to justify theoretically the introduction of other control’s variables. The introduction of the **Gravity Equation** as a control variable is due

to one reason. Initially, this “gravity models” are performed to predict international trade flows and trade agreements, but in these models we transpose this idea to Dispute Settlement Procedure. Originally, the “gravity equation” explains why countries deal, concluding that this relation is due to the similarity in the market size and closeness. Nevertheless, a critical observation is that WTO membership may affect the probability that two countries trade, independently of the gravity equation’s considerations.

My intention here is to change this statement in the next assertion: If the WTO’s could enforce the probability for trade, maybe the gravity equation could explain some results of the DSP. The main argument is if similar market size and closer countries have a high probability to create bilateral trade agreements, this same result could be tested in the resolution of trade conflicts by a simply deduction. Therefore, similar economics (a case between large economy vs. large economy) could more easily arrive to early settlement because of their economic similarities, or maybe could give more concessions in such cases or not. Then, the principal question is if the gravity equation could explain some WTO’s DSP outcomes, and we will try to solve this problem controlling this effect in an *ex post* analysis of the gravity model.

4. Data and variables:

The data used to elaborate our study come from the dataset elaborated by Eric Reinhardt and Marc Busch for his article “Developing countries³ and General Agreement on tariffs and Trade/World Trade Organizations Dispute Settlement” in the *Journal of World Trade*⁴. The dataset provides a sample of 154 concluded WTO disputes filed from 1993 to 2000. The remainder economic data is from the *World Bank’s Development Indicators 2005* and *OECD’s International Development Statistics Online (OECD.Stat*⁵). Regarding the rest of economic variables like trade grouping, bilateral economic aid, etc., the information above their building and sources can be found in the Annex, added at the end of the article.

³ The authors of the article use a measure of level development like per capita income or GDP to refer to **developing countries**: “However, for the simple purpose of enumeration, we group the United States, Canada, Japan, Norway, Switzerland, Australia, New Zealand and the EU15 as *developed*, with the remaining GATT/WTO Members as *developing*” BUSCH, M. L. & REINHARDT, E. (2003) *Developing countries and General Agreement on tariffs and Trade/World Trade Organizations Dispute Settlement. Journal of World Trade*, 37, 719-735.

⁴ This dataset is provided in Reinhardt’s webpage: <http://userwww.service.emory.edu/~erein/>

⁵ OECD.Stat-online: <http://www.oecd.org/dac/stats/idsonline>

Remarkable is the observation of the authors where they comment that: *to compare the ability of developing country complainants to induce concessions by defendants under the GATT and the WTO, we need to control differing legal dispositions of each case.* They identify the stage reached and the direction of rulings for all disputes.

The purpose of this paper is to compare the ability of developing and developed countries to determine concessions under the WTO system. In this case we need to control, not only by legal variables, such as the establishment of a panel, moreover, it's necessary to control by other economic variables that could influence the outcomes. The key economic variables are the economic variables referred to the market size, measured by the GDP and GDP per capita, and, secondly the variables related to diversity considered by the percentage of GDP share by trade, imports and exports in the year when the dispute begins.

On the other side, the control variables are these variables that explain probable measures of *economic retaliation* due to economic aid or trade dependence, that play a role via other bilateral economic relationship which are not under the WTO control. In these situations, economic dependence which can exist between the two parts then necessarily influences the nature, the amount and the impact of these costs of the outcomes in the DSP (Besson and Mehdi, 2004). We include two kinds of retaliation in international highlighted in the literature. First, Chad P. Bown deals with the bilateral economic assistance which leads to close economic interdependence. The argument is that the country, which receives economic assistance, exercises self-constraint during the whole process in order not to risk its privilege (Bown, 2004a). Secondly, other type of retaliation in international economic politics is the pre-existent preferential trade agreements between countries or their participation in a privileged trade area. Once again, the threat of economic relationship deterioration, after litigation between two countries with close economic interdependence, influences the litigant behaviors during a dispute settlement (Bown, 2004b, Bown, 2005, march).

After that, the hypothesis, which remains in the last paragraph, elucidates the possibility of economic retaliation of a country against a trading partner that disadvantages the later. Consequently, the effect of these two variables is described as: the higher the threat of economic retaliation is, the smaller the probability to win a

dispute is.

We also include variable to address “the economic and political stakes of a dispute, to control for the possibility that settlements may be more likely in lower-stakes cases” (Busch and Reinhardt, 2006, forthcoming). Two dummies, *Agriculture and Politically sensitive case*, identify disputes thought to be especially difficult to resolve due to the types of sectors or measures they target. Agricultural protections are often said to be particularly inviolable. Politically sensitive cases flag disputes over measures justified for non-commercial reasons such as environmental regulation, etc.

To our empirical analysis we estimate an ordered probit model of the defendant’s level of concessions, with the complainant and defendant’s level of development (GDP, GDP per capita income) and trade (imports and exports) as the central explanatory variables. The regression also includes dummy variables for Panel establishment and ruling direction, if any, as defined earlier, constructed in the database by Busch & Reinhardt (Reinhardt and Busch, 2003).

5. Research Design

This section will be organized as follows: firstly, we state the main hypothesis stemmed from the previous sections; then, we fix econometric models of the research.

Hypothesis: We assume that economic power has a conjunction between market size and economic diversity is still significant in the outcomes of the DSP. Therefore, as long as the higher the asymmetry between two countries is, the lower the probability of victory for the small country is, in despite of the efforts to palliate the effects of economic characteristics in the Dispute Settlement Process. The question is to know if this economic power, like another element of the bargaining power, really affects the DSP outcomes, controlling for other factors. At the end, we are testing and refusing the assumptions of realistic models, which defend the absolute importance of state’s power in the regulation procedures (Drezner, 2007) and neglect the importance of institutions in these outcomes. In this case, I try to present evidence that this trend was attenuated by institutional factors.

A political-economic model of the WTO's Dispute Settlement Procedure's

concessions:

The first model (*Model 1*) will reproduce the basic assumption over concessions by defendant testing the equation previously checked in other researches (Busch and Reinhardt, 2003), although incorporating additional explanatory trade variables, and taking the institutional variables like controls.

After that, posterior models (*Model 2*) we will introduce some suggestions made by Bown, Besson & Mehdi (Besson and Mehdi, 2004) for the determination of outcomes in WTO. Next, we will include the rest of control variables and confirm the influence of the explanatory variables in concessions in function of the status of the parties in the case of agriculture case (*Model 3*). Finally, we will test the pressure of the economic power variables and retaliation variables in the early settlements (*Models 4 and 5*), using again the Busch & Reinhardt's model for this situation, combined with the new explanatory variables. In the conclusion we insert a GATT dispute settlement model (*Model 6*) to appreciate the influence of the economic explanatory variables in the ancient institution and what's the effect of the institutional or juridical change of the dispute system between GATT and WTO.

Formally, the first set of models (without institutional variables) will be:

$$\Pr(\text{concessions by defendant}) = f [GDP_{\text{complainant}}^+ GDP_{\text{defendant}}^+ GDP_{\text{pccomplainant}}^+ GDP_{\text{pcdefendant}}^+ \text{import}_{\text{complaint}}^- \text{import}_{\text{defendant}}^- \text{export}_{\text{complainant}}^+ \text{export}_{\text{defendant}}^+] + \varepsilon$$

For the economic retaliations variables considered, the expected sign ought to be:
 $RTAP^- / \text{bilecoaid}^-$

Table 1: Explanatory variables a priori expected sign

Variable	Expected sign
GDPcomplainant	+
GDPdefendant	+
GDPpccomplainant	+
GDPpcdefendant	+
importcomplaint	-
importdefendant	-
exportcomplainant	+

exportdefendant	+
RTAP	-
bilecoaid	-

All economic variables are lagged one year, and the sign of the first derivative indicates the expected direction of their effects on level of concessions.

6. Empirical tests

The results of the first model -**Model 1**- consider the Busch & Reinhardt's model, including the economic variables which explain the diversity of the market: import and export (table 2). The results of the model obtain a pseudo- $R^2 = 0.17$, meanwhile the original model have a 0.12, indicating that in our model we increase the explanation of the whole model. This fact increase the significance of some variables is relevant. Moreover, the new explanatory variables that describe diversity work in the way that we expected. Both variables are significant for the complainant's benefits in the model. The coefficient are so explicative of the diversity because of importation's coefficient affects negatively to the economic power of the complainant country, as we have explained in the theory, as a consequence of the asymmetrically interdependency on other actors and goods.

On the other hand, exportations affect positively to the complainant in the same way that market size represented by per capita GDP. In the same way, the export is used like an alternative indication if we consider that a substantial part of the production is exported. Exportations then can be also an indication of the accommodation of the countries to global regulation, increasing the legal capacity of these countries as a result of the benefit of a global economy with export-favourable rules. After that we can consider exportation like a variable that should enforce the market size, due to the stronger economies ought to have a correlation between exports and GDP.⁶

To sum up, how exports and imports affect to the economy is resumed by Bagwell & Staiger in the next paragraph when they talk about the trade effects on bargaining

⁶ Bown also describe the effects of the non-diversified export countries that are also less likely to challenge powerful countries like the US. This is of potential concern given that non-diversified exporters may be got fewer concessions than diversified economies. (Bown, 2005, march). This is a point of view to consider in other papers.

power: "Trade openness foreign market opening and associated increases in export opportunities as a domestic political benefit and domestic market opening as a cost. For example, the greater the export opportunities that can be attained, the greater the domestic political benefit to the government of the country attaining them". (Bagwell and Staiger, 1999, march: 347).

In conclusion, this model shows that as long as the country's wealth increase, more probable is the opportunity and level of concessions. Then we can conclude that poor countries, with a low market size and a great amount of imports, are still less likely to get concessions despite the WTO's reforms to palliate this effect.

The **model 2** in table 1 reproduces the last model introducing the variables that represent the economic retaliation such as economic assistance and membership in the same regional trade area. We appreciate how the influence of this to variables is not significant in the Dispute Settlement process, contradicting the Besson & Mehdi affirmation about the influence of these variables. Then we can assume that, accordingly Busch & Reinhardt's conclusion, that retaliatory measures have lost their importance in the determination of concessions under the WTO Dispute Settlement Procedure. Finally, we can confirm that Bhagwati's affirmation, doesn't work in this cases: the "hegemonic powers are protected by the fact that retaliation for such behavior can occur on other dimensions such as aid and preferential market access through free trade agreements and many other policy instruments of punishment and inducement" (Bhagwati, 2002: 246).

With the inclusion of the variables which represents the pressure of economic retaliation we try to test Busch & Reinhardt appreciation about the role of retaliation at the WTO Dispute Settlement. The scholars recognize that larger countries can more credibly threaten to retaliate, but threats of retaliation are not the key to this system. They based their thought in Robert Hudec (Hudec, 2002) appreciation, who explains that other "provisions of the WTO make legal complaints without retaliation quite a bit more effective than they were under GATT" (Busch and Reinhardt, 2004, april: 4). Then, Despite the inability of developing countries to retaliate could be a problem, they do not have to worry about it, due to DSP aminorates the effects of the economic dependence.

In the next models (**model 3**), referred to WTO's dispute settlement process will

try to confirm the influence of the explanatory variables on concessions in function of the status of the parties (table 3). We discriminate if the party (complainant & defendant) is a developing country or a developed country, in conjunction with some controversial topics such as agriculture.

The point of analysis of these **agricultural disputes** concerns to the effects of case specific characteristics on dispute settlement outcomes. Generally, is argued that the North will not accede to Southern demands to unilaterally reduce industrial and agricultural protection and subsidization. "As global agricultural prices are depressed by the huge American and EU subsidies, domestic agricultural prices fall to, so that even those farmers who do not export are hurt. And lower incomes for farmers translate into lower incomes for those who sell goods to the farmers (...). Everyone in the country suffers. The subsidies may not have been intended to do so much harm to so many, but this is the foreseen consequence" (Stiglitz, 2006: 86).

The appreciation of some academics like Stiglitz, is that the Uruguay Round finished with the promise "to liberalize trade in agriculture and textiles, in return, developing countries agreed to reduce tariffs and accept a range of new rules and obligations (...) Afterward, developed countries did not keep their side of the deal. (...) no end to agricultural subsidies was in sight." (Stiglitz, 2006: 77). The consequences of this are that "the Uruguay Round made an unlevel playing field less level. Developing countries impose far higher tariffs against developing countries than against developed ones. And this discrimination exists even after the developed countries have granted so-called preferences to developing countries. Rich countries have cost poor countries three times more in trade restrictions than they give in total development aid." (Stiglitz, 2006: 78). Then, we observe that developing countries used the DSP to try to break down the barriers of tariffs and financial assistance to agriculture exports of developed countries.

The analysis tells us how the developing complainant's market size is relevant to the concessions in agriculture cases. Maybe, the number of observations it's not yet enough to infer that developing countries are so vulnerable in Agriculture cases against developed countries which are opposed to reduce protectionism to this sector. In conclusion, if we admit that the continuation of export subsidization has been equally damaging and agriculture continues been an area where the dumping practice works. We

can also assume that the DSP give us some evidence that complainant's market size is relevant, meanwhile in the case of defendant is more affected in the cases by the trade openness. Imports, how we expected, influence negatively to the defendant, and exports increased the bargaining power to not make concessions in agricultural disputes.

Afterward, it is difficult to make a strong assumption about this issue yet, because of the reduced size of the sample and measures. In this case the coefficients of the complaint's market size are contradicted by both coefficient of variables GDP and per capita GDP. To Watkins affirmation which "his behaviors highlight why the WTO rules have been subordinated by rich countries to the vested interests of large farmers and powerful agricultural lobbies" (Watkins, 2001, october: 5), can be partially inferred in the case DSP, but it needs a complete study to extract final results.

In the **model 4** and **model 5** (Table 4) we study the probability that a case get settle early, with a dependent variable that determines if the defendant concede full concessions or not. The latter model expresses the economic retaliation influence in the early settlement process. As we seen in the models 1 and 2, the effect of the exports and imports explanatory variables have the expected impact and in the same direction, increasing the bargaining power to extract concessions in the case of exportations, and decreasing the probability of concessions in the case of imports. Moreover, this bargaining power is attenuated by the introduction of the economic retaliation variables, been significant in comparison with the two first models.

in summary, we see how threat of economic retaliation seems to affect countries performance when they receive bilateral aid and when they are members of the same economic area. Only RTAP achieves statistical significance and has the predicted sign, after that, our finding confirms the idea that a country, mainly a developing country, which receives is member of a Regional trade area, is a disadvantage during the early settlement process. Nevertheless, the effect of the economic dependence created by bilateral aid has no influence in the outcomes.

7. Conclusion

The regressions fitted in this paper complete Busch and Reinhardt (2003) appreciations about the bargaining power, mainly the differences between the bargaining

power between developed and developing countries. We have tried to test the real influence of economic variables in the bargaining power of countries inside the Dispute Settlement Procedure. This economic power is measure by a traditional indicator, the market size; take it in account by these authors. In this case, we reinforce the model with new variables that express, not only the market size (where we include exportations), in addition we include diversity expression like the level of importations and exportations also.

The study has focused on the consequences of trade, concretely trade openness to evaluate how this factors influence in the economic power of member countries in the WTO DSP, complementing Busch and Reinhardt study that only consider market size. In this research economic openness, how we have observed, could have a positive and negative effect in countries' bargaining power as a consequence of import, considering this last as a sign of economic dependence that affect negatively to countries. Conversely we notice how exports suppose a benefit as Bagwell and Staiger remarks.

Moreover we are interested in measures of economic retaliation like an effect that empower and reinforce the economic power. In this study we only consider two economic effects, but we can consider more retaliation mechanisms such as tariffs, military power, etc., also consider by Besson and Mehdi, Keohane, etc.

Next, we try to test if the WTO Dispute Settlement process has effectively palliate the economic power influence and retaliatory measures menaces, assuring an impartial and fair trade dispute resolution mechanism where the countries' sovereignty have the same importance at the time of resolution. At the same time, we also test the role of institutions on the attenuation of the economic power of countries in the DSP, and, if it produces results out of reach of the influence economic power of the states.

From the models placed to test the economic power influence in the DSP and previous early settlement stage, we extract the following conclusions: First, trade openness, represented by imports and exports, have a relevant effect on the concessions achieved by complainant, despite the principal effect is determined by GDP per capita. Exports influence positively to the complainant in the same way that market size, considering it like a variable that should enforce the market size due to the stronger economies ought to have a correlation between exports and GDP.

To sum up, the gap between developed and developing countries in winning concessions from defendant are also by reason of the differential trade openness between countries. But we can forget that this trade openness could be a consequence of the market size, being obligated to consider that the explanatory effects of trade openness reinforce, but doesn't substitute, the determination of economic strength by market size in the bargaining power.

Second, accordingly to Busch & Reinhardt's conclusion, economic retaliation has lost their weight in the determination of concessions under the WTO Dispute Settlement Procedure. Nevertheless, we find evidence if parties are members of the same regional trade area. Specifically, it exists a high persuasion provoked this kind of dependency in the early settlement stage outcomes. Nevertheless, the attenuation of the effects of retaliatory measures by more wealthy countries, confirms that the gains by the new ruling of the DSP has increased the equality in bargaining power between developed and developing countries, at the same time, that ensure more fair final agreements in whatever stage of the process.

Third, the analysis of controversial agricultural disputes about the preeminence of developed countries is not conclusive due to some methodological and sample problems. These troubles can not let us completely infer if developing countries are harmed or benefited by DSP rules in agriculture cases. Despite of this, the idea of this model was to test if the DSP compensate the negotiated agriculture WTO rules, subordinated by rich countries to the vested interests of large farmers and powerful agricultural lobbies". This claim can be more or less tested with this preliminary conclusion, asserting that developing countries can not use DSP to brake down the agricultural barriers of developed countries.

Finally, we include a final model (**model 6**) where we compare the influence of the explanatory variables during the GATT dispute system, with the weight of institutions and its reforms in the economic power of states during the WTO. We can conclude that WTO Dispute Settlement has attenuated the influence of economic retaliation and the power of defendants to negate concessions. In the comparative *table 5* we appreciate how imports and exports affects in the same way that WTO, but in this case the party affected is the defendant. Then, we can assume that powerful defendant can resist the demands of

complainant more easily in GATT system, according to the general affirmation on the literature that the antique system discourages demandants to initiate disputes against developed countries.

Moreover, we see how bilateral economic aid and membership in the same regional trade area, affects positively to the level of concessions of complainant. This effect is represented by the positive coefficient that show how developed countries can profit of this advantages, but without any kind of significance.

To conclude, this paper highlights that as long as the country's wealth increase, more probable is the opportunity and level of concessions. Then, we can conclude that poor countries, with a low market size and a great amount of imports, are still less likely to get concessions, despite the WTO's reforms to palliate this effect. Afterward, the rule of law system does not guaranty fair outcomes yet, in which only the rule of law have to regulate the results and the equally power of states. Despite of these assumptions, the WTO's dispute system attenuates the influence economic retaliations in comparison with the GATT system, as we observed in this paper. Nevertheless, WTO dispute system also needs an adequate reform to palliate the effect of market size and trade openness in the outcome.

ANNEX: Tables, variables and sources

Table 2: Ordered probit models of WTO Dispute outcomes, 1993-2000

<i>Dependant variable: Level of concessions by defendant</i>	Model 1	Model 2
Complainant's per capita GDP	0.276*** [0.104]	0.248** [0.117]
Defendant's per capita GDP	0.048 [0.123]	0.099 [0.138]
Complainant's GDP	-0.115 [0.233]	-0.140 [0.230]
Defendant's GDP	-0.189 [0.221]	-0.262 [0.225]
Complainant's Exports of goods and services	0.091***	0.100**

		*
	[0.034]	[0.034]
Defendant's Exports of goods and services	0.037	0.037
	[0.034]	[0.031]
	-0.107**	-0.115**
Complainant's Imports of goods and services	*	*
	[0.037]	[0.036]
Defendant's Imports of goods and services	-0.063	-0.060
	[0.040]	[0.037]
Ruling body established	0.995***	0.993***
	[0.332]	[0.360]
Ruling for complainant	-0.752*	-0.796*
	[0.442]	[0.479]
Mixed ruling	-0.603	-0.732
	[0.520]	[0.551]
		-1.787**
Ruling for defendant	-1.844***	*
	[0.502]	[0.519]
Agriculture Case	0.192	0.159
	[0.197]	[0.205]
		-1.089**
Politically 'sensitive' case	-0.995***	*
	[0.278]	[0.280]
Multilateral Case	0.484	0.574*
	[0.300]	[0.318]
Discriminatory measures were the target of the complaint	-0.030	-0.064
	[0.257]	[0.255]
Trade Gravity equation	0.045	0.099
	[0.206]	[0.207]
Parties are members of the same regional trade area		0.326
		[0.289]
Bilateral economic assistance between parties		0.365
		[0.300]
Observations	153	153
Pseudo R ²	0.1796	0.1906
Robust standard errors in brackets		
* significant at 10%; ** significant at 5%; *** significant at 1%		

Table 3: Ordered probit models of WTO Dispute outcomes, 1993-2000 if the complainant is a developed country in an agriculture case.

<i>Dependant variable: Level of concessions by defendant</i>	Model 3
	0.600*
Complainant's per capita GDP	* [0.266]
Defendant's per capita GDP	-0.304 [0.192]
Complainant's GDP	-0.186 [0.128]
Defendant's GDP	-0.009 [0.148]
Complainant's Exports of goods and services	0.023 [0.058] 0.093*
Defendant's Exports of goods and services	* [0.037]
Complainant's Imports of goods and services	-0.032 [0.056] -0.092*
Defendant's Imports of goods and services	* [0.038]
Observations	59
Pseudo R ²	0.2013
Robust standard errors in brackets	
* significant at 10%; ** significant at 5%; *** significant at 1%	

Table 4: Probit models of WTO's early settlement and outcomes, 1993-2000.

<i>Dependent variable: Early Settlement if defendant fully conceded before ruling issued</i>	Model 4	Model 5
		0.325*
Complainant's per capita GDP	0.259* [0.135]	* [0.152]
Defendant's per capita GDP	0.119 [0.160]	0.113 [0.164]
		-0.176*
Complainant's GDP	-0.131 [0.083]	* [0.090]
Defendant's GDP	-0.192 [0.130]	-0.208* [0.112]
	0.103*	0.099*
Complainant's Exports of goods and services	** [0.037]	** [0.038]
Defendant's Exports of goods and services	0.027 [0.024]	0.027 [0.027]
	-0.120*	-0.121*
Complainant's Imports of goods and services	** [0.040]	** [0.043]
Defendant's Imports of goods and services	-0.035 [0.028]	-0.041 [0.033]
		0.618*
Agriculture Case	0.581* [0.326]	* [0.315]
Multilateral Case	-0.333 [0.256]	-0.385 [0.263]
Discriminatory measures were the target of the complaint	0.136 [0.272]	0.207 [0.266]
Politically 'sensitive' case	-0.822 [0.563]	-0.724 [0.564]
Parties are members of the same regional trade area		-0.517* [0.288]
Bilateral economic assistance between parties		-0.241 [0.279]
		7.397**
Constant	5.828** [2.800]	* [2.536]
Observations	153	153

Pseudo R² 0.1295 0.1501

Robust standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 5: Ordered probit models of GATT -model 6- and WTO – model 2- Dispute outcomes, 1980-1995/ 1995-2000

	Model 6	Model 2
<i>Level of concessions by defendant</i>		0.248
Complainant's per capita GDP	0.082	** [0.117]
Defendant's per capita GDP	-0.248 [0.186]	0.099 [0.138]
Complainant's GDP	0.040 [0.059]	-0.140 [0.230]
Defendant's GDP	0.049 [0.102]	-0.262 [0.225] 0.100
Complainant's Exports of goods and services	0.022	*** [0.034]
Defendant's Exports of goods and services	* [0.029]	0.037 [0.031] -0.115
Complainant's Imports of goods and services	-0.022	*** [0.036]
Defendant's Imports of goods and services	*** [0.030]	-0.060 [0.037]
Ruling body established	*	**
	0.730*	0.993*

	[0.289]	[0.360]
		-0.796
Ruling for complainant	0.015	*
	[0.253]	[0.479]
		-0.899
Mixed ruling	***	-0.732
	[0.301]	[0.551]
		-9.671
Ruling for defendant	***	***
Agriculture Case	[0.257]	[0.519]
	0.290*	0.159
	[0.175]	[0.205]
		-1.089
Politically 'sensitive' case	-0.005	***
	[0.283]	[0.280]
Multilateral Case	-0.323	0.574*
	[0.204]	[0.318]
Discriminatory measures were the target of the complaint	-0.126	-0.064
	[0.257]	[0.255]
	0.512	
Parties are members of the same regional trade area	**	0.326
	[0.224	[0.289
]]
	0.431	
Bilateral economic assistance between parties	**	0.365
	[0.206	[0.300
]]
Observations	230	153
Pseudo R ²	0.1249	0.1906
Robust standard errors in brackets		
* significant at 10%; ** significant at 5%; *** significant at		
1%		

Variable definition and data source

Dependant variable:

CONCESSIONS: level of concessions made by the defendant:

1: no concession.

2: partial concession.

3: full concession.

Explanatory variables:

Economic diversity:

TRADECOMPLAINANT: Complainant's trade (% of GDP)

TRADEDEFENDANT: Defendant's trade (% of GDP)

IMPORTCOMPLAINANT: Complainant's Imports of goods and services (% of GDP)

IMPORTDEFENDANT: Defendant's Imports of goods and services (% of GDP)

EXPORTCOMPLAINANT: Complainant's Exports of goods and services (% of GDP)

EXPORTDEFENDANT: Defendant's Exports of goods and services (% of GDP)

Market size:

(Extracted from Busch & Reinhardt, 2003)

GDPCOMPLAINANT: Log of Complainant's GDP. The log of the complainant's 1995 GDP in constant 1995 U.S. dollars.

GDPDEFENDANT: Log of Defendant's GDP. The log of the complainant's 1995 GDP in constant 1995 U.S. dollars.

GDPPCCOMPLAINANT: Log of Complainant's GDP per capita: The log of the complainant's 1995 per capita GDP in constant 1995 U.S. dollars.

GDPPCDEFENDANT: Log of Defendant's GDP per capita: The log of the complainant's 1995 per capita GDP in constant 1995 U.S. dollars.

Control variables:

Institutional variables:

(Extracted from Busch & Reinhardt, 2003)

Panel: Ruling body established

Ag: Agricultural case.

Discrim: Discriminatory measures were the target of complainant.

Multilateral: Multilateral case.

Sensitive: Politically sensitive case

Economic variables

GRAVEQUAMILES =

$$F_{ij} = G \frac{M_i^\alpha M_j^\beta}{D_{ij}^\theta}$$

The gravity equation was calculated by this function:

$$\ln(\text{Trade}_{ij}) = C + a \ln(\text{GDP}_i) + b \ln(\text{GDP}_j) + c \ln(\text{distance}_{ij}) + u_{ij}$$

Both sources was extracted from Keith, H. (Keith, 2003) and Feenstra, R. C., Markusen, J. R. & Rose, A. K. (Feenstra et al., 2001, may). The distance between countries was

sized by the web: <http://www.indo.com/cgi-bin/dist>

RTAP: Distribution of countries by trade grouping: Dummy variable that takes on the value of 1 if the countries in the case in question were involved, at the time of the dispute, in the same trade grouping area. To determine it we consulted firstly the UNCTAD's list of "Distribution of countries by trade grouping", available at http://www.unctad.org/en/docs/gdscsir20041a1_en.pdf. The list was completed with the WTO's list of "Regional Trade Agreements Notified to the GATT/WTO and in Force," available at http://www.wto.org/english/tratop_e/region_e/region_e.htm. All trade regions were considered with the exception of the Free Trade Area of the Americas (FTAA).

BILECOAID: Dummy variable that takes on the value of 1 if one of the countries in the case in question is recipient of bilateral economic assistance for the other counterpart. To determine if there are an aid relationship between countries and the total amount of the aid, we have consulted the *OECD's International Development Statistics Online*.

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