Unraveling the Differences between Countervailing Duty and Antidumping Data

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Abstract: This paper documents significant differences in U.S. antidumping (AD) and countervailing duty (CVD) activity and outcomes over time despite administration of these trade protection programs by the same U.S. agencies. CVD cases diminish over time and show little change in the average duty assessed since 1980. In contrast, AD cases over the same time period have maintained a high level of activity, as the average duty has increased fourfold. After documenting these differences, the paper develops a model to explain a firm's decision to petition for the two types of trade protection and hypothesize about the reasons driving their decisions. A main assertion of the model is that there is less room for agency discretion in CVD cases and a regression analysis using recently compiled CVD data finds confirmatory evidence.

Approved: _____

<div align="center">Prof. Bruce Blonigen   Date</div>

1. Introduction

A well-established literature has examined the economics and political economy of antidumping (AD) laws and their consequences.[1] Despite similar legal and administrative institutions governing their application, there is a relative paucity of work examining the economics of countervailing duty (CVD) laws. An obvious explanation for this is the difference in actual real-world activity between AD and CVD cases. As shown in figure 1, U.S. AD activity has been substantial since well-known legal changes in 1980.[2] Prusa (2001) demonstrates a strong rise in AD activity worldwide. The boom in recent AD activity has spawned a rich array of papers discussing the effects of resulting antidumping duties (ADD).

As shown in figure 1, U.S. CVD case activity follows no such trend. Filings occurred in numbers similar to AD in the early 1980's. By the mid 1980's we begin to see a decline in CVD filings, and a growing infrequency relative to AD filings. There is a pronounced drop in CVD and AD activity in 1995 upon the implementation of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) and the inception of the World Trade Organization (WTO). Soon after this change, AD activity quickly returns to similar levels before the change, but CVD does not follow suit. From 1995 to 2004 there were only 72 CVD petitions resulting in 57 CVD orders in the U.S. Across the world during the same period, the next highest number of orders came from the European Community with 18 and Canada with 10 (U.S. GAO (2005), 39). Chad Bown's AD database demonstrates that the disparity between the U.S. and other countries in CVD cases relative to AD cases is not limited to the period from 1995-2004. Bown

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[1] See Blonigen and Prusa, 2003, for a survey of the recent literature.
[2] For a thorough treatment of the history of AD see Irwin (2004).

compiled information regarding all CVD activity in Canada, Mexico, and the U.S. The
data clearly shows the sporadic and infrequent occurrence of CVD cases in Canada and
Mexico.

Living in the shadow of AD research, CVDs are frequently glossed over. CVDs are
briefly addressed in many AD research papers, but have received little direct analysis.
The difference in real-world activity in AD and CVD cases appears to be an open
question without any well-formulated hypotheses as to its explanation. As a first step to
understanding differences in AD and CVD activity, this paper will illuminate some key
differences between AD and CVD practices by econometrically analyzing case-specific
CVD data. When compared to previous analyses of AD activity, fundamental
differences in the treatment and outcomes from the two methods of protection become
clear. This may shed light on the recent trend for countries to favor AD action over CVD
action.

The paper will continue as follows in an attempt to highlight the possible reasons
behind meager CVDs relative to the average ADD. The next section will give a brief
overview of CVD and AD calculation methodology showing the similarity in the
processes for both, and highlighting some fundamental differences between the two.
Next, I will use descriptive statistics to further demonstrate the observed differences, and
postulate on possible explanations for the dissimilarities. I will then develop a simple
model for a firm's choice to file for trade protection, and what type of protection to file
for. My hypothesis that most of the discretionary factors shown to drive the upward trend
in ADDs do not exist, or have a counterpart in CVD methodology, which is the source of
CVDs that seem paltry relative to ADDs. I will support my hypothesis with a regression

analysis of CVD data, which will make up the final sections of the paper.

2. Duty Methodology

In the U.S., "interested" domestic firms who claim injury from an exporting country's goods must first file a petition for protection. In a CVD case injury takes the form of subsidies granted to exporters giving them an unfair cost advantage over domestic producers. In an AD case domestic firms claim injury from foreign firms that are pricing below fair, or market, value. The International Trade Commission (ITC) preliminarily determines whether or not there is a threat of material injury to domestic firms due to the imports under investigation. If they see a threat of injury the case is sent to the International Trade Administration (ITA), which makes a preliminary duty determination to counteract the ill effects of these unfair trade practices. If the ITA determines an applicable duty greater than a set de minimus level,[3] the case is sent back to the ITC to make its final decision as to whether the subject merchandise is injuring domestic firms. If the ITC's final determination is affirmative the case is sent to the ITA, which adjusts its preliminary duty rate to capture any mistakes or new information, and if its decision is affirmative and the rate is above the de minimus level the duty is put in place.

2.1 CVD Calculation

In a CVD case the ITA evaluates which programs are countervailable, and the magnitude of these programs in order to determine a duty. If the ITA determines foreign

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[3] 1% ad valorem for cases against industrialized nations, and 2% for cases against nonindustrialized nations.

government subsidies exist, and are above a specified de minimus level, a suspension of liquidation is set requiring all imports of the good subject to the investigation to be taxed by the ad valorem percent determined by the ITA. Determining the magnitude of a subsidy is a simple calculation based upon an accepted formula. If the subsidy is contingent upon export performance its value is determined by dividing the amount of the subsidy by the firm's total exports. In the case of a production subsidy, the amount of the subsidy is divided by a firm's total production. Subsidy amounts and types are reported by foreign firms along with their total production and exports in response to the survey sent out by the ITA to firms under investigation.[4] Therefore, there is little estimation involved in the calculation of CVDs, which does not allow the ITA to use discretion when calculating CVDs (See chapter two of U.S. ITC (1995) for a more detailed look at the laws governing CVDs). The explanation of AD procedures in the next section will highlight the profound difference in the amount of discretionary practices used in duty calculations that exist in AD compared to CVD.

The most scrutinized part of CVD calculation is the determination of which programs are countervailable. For example, Anspacher et. al.(1991) points out that a duty put in place to counteract a production subsidy is frequently larger than what is necessary. The ITA assumes full pass-through of a production subsidy to exported goods, which generates a duty larger than what is needed to counteract the effects of the program on exports unless the ratio of the price elasticity of demand to the price elasticity of supply in the home market equals zero (Anspacher, 107). There exists a wide array of

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[4] See Anspacher et. al. (1991) for a description of the demands of the questionnaire. The authors assert that the extensive quantity of information requested places an unfair strain on smaller firms within the investigation, and this procedural bias leads to a higher frequency of best information available use.

statute defining whether or not a program is subject to a duty, and how to calculate the duty necessary to counteract the subsidy. Therefore, little room exists for the ITA to use discretion to inflate CVDs by calculating duties in varying ways, or considering extra programs countervailable. The only discretionary practice used by the ITA to calculate CVDs occurs if a firm does not reply to, or fully complete, their survey. Moore (2005) creates a game theoretical model as to why firms would not participate in an AD case. A similar model for CVD would fall directly from Moore's AD model. In a scenario of withheld information, the ITA attributes best information available (BIA). These practices are discretionary insofar as the ITA will use the values for subsidy magnitudes, and firm sales activity as reported by the petitioning firms (which tend to inflate duties). The ITA will also attribute the highest rate of any other subsidies that have been determined to exist within the country under investigation from previous CVD cases to nonrespondent firms. BIA is punitive in nature, and I will show in my regression analysis that such cases yield higher duties. BIA demonstrates the potential heights CVDs could reach if discretion was not checked within their methodology.

2.2 ADD Calculation

Calculating an ADD is a more intricate process for the ITA. The ITA calculates an ex factory price (the implicit price of the product immediately before it leaves the factory) of a good destined for the U.S., and they compare it to a "fair" price in order to determine the duty they must apply to counteract the difference between the two. In order to calculate ex factory prices the ITA backs out external cost from the final consumer price. "[Costs] include transportation and associated costs, tariffs and other

taxes as well as markups by distributors. It is assumed throughout these calculations that pass-through of such costs by the firm is perfect (Blonigen (forthcoming, a), 5)." Here we see the first example of discretion used in the calculation of an ADD. Ex factory prices are unobservable, and their calculation is dependent on how costs are backed out of observable prices. At best the assumption of full pass-through correctly calculates the ex factory price, but most likely it deflates the export price which inflates the dumping margin.

The ITA then makes "price-to-price" comparisons of the U.S. ex factory price to the fair price in comparable periods within the period of investigation. More methodological discretion is used in how the ITA makes its price comparisons. They use a method called "zeroing." This practices considers a zero margin if the U.S. price is greater than the fair price. Baldwin and Moore (1991) discuss the flaws of this method, and observe that "as long as prices vary over the sample period, a positive dumping margin can be found even if prices in the two countries are identical on every day." (pg. 271)

To calculate fair price of a product, the ITA uses a weighted average of a country's own market prices. When the domestic price of the good cannot be observed due to insufficient quantities of the good domestically, the ITA looks at an average of ex factory prices of the good exported to other countries to attain fair price. The decision of which countries to examine is discretionary. In the scenario of insufficient sales in a third market and the domestic market the ITA must resort to "constructed value" of the normal value. To construct this value the ITA employs the foreign firm's cost data from the questionnaire to develop the firm's total average cost. They include a profit margin, and

use the assumption of a perfectly competitive market to establish fair price as the minimum of the firm's average cost curve including the profit margin. The ITA's constructed value is rife with discretion. In a plethora of scenarios, including a firm making a loss or a non-perfectly competitive market, it will yield a fair value that is inflated which will lead to increased dumping margins when compared to U.S ex factory prices.

Another situation where the ITA must use discretion to calculate a fair price occurs when the case is filed against a country that operates under a non-market economy such as China. Blonigen (forthcoming, a) explains in this scenario, "Cost and price data for such firms is nonexistent or meaningless from an economic/accounting perspective. As a result, the USDOC calculates normal value through a "factors of production" analysis using information from a "surrogate" country." The result is that the ITA chooses a market economy that they deem similar to the economy under investigation and use the cost structure of this country for analysis. After adjusting for packaging costs, transportation costs, and profits they develop a fair value. The ITA's choice of a "surrogate" country is discretionary, and their adjustments allow them the possibility of manipulating dumping margins. Action against nonmarket economies is a key difference between CVD and AD activity. Due to precedent, the ITA does not pursue a CVD if it is filed against a nonmarket economy. The U.S. Government Accountability Office (2005) discusses this precedent and its roots in the fact that too much discretion and construction of the factors of a duty would be involved for CVDs to be justifiably pursued in such a scenario. This is a striking difference in practice from AD administration that seems to embrace the use of discretion to calculate duties.

As in a CVD case, the ITA will attribute BIA to a firm declining to respond to their questionnaire in order to calculate dumping margins. The punitive mindset is similar for AD cases. The amount of information necessary to calculate an ADD is daunting, and as a result when information is missing the ITA will use what is provided by the petitioners. The petitioners have an incentive to see high duties, and use the ITA's discretionary practices to inflate their duty calculations. Blonigen's (2003) result that BIA uses causes a significant increase in dumping margins comes as no surprise. BIA effectively allows the ITA to use their full range of discretion in their duty calculation. The lack of discretion involved in CVDs leads me to infer that BIA will lead to less of an increase in a CVD than the increase in an ADD shown by Blonigen (forthcoming, a).

Blonigen (forthcoming, a) demonstrates econometrically that constructed value, factors of production, and BIA when used in the calculation of ADDs cause significant increases in the dumping margin holding all else constant. He shows that these discretionary practices alongside the inherent discretion in calculating an ADD are driving the sharp growth of the average ADD in recent years. It is apparent that even though both duties are similar in their application, some fundamental differences between the methodologies used to calculate ADDs and CVDs exist. There are many options for discretionary manipulation of ADDs ranging from how they make their comparisons, to the country targeted by the petition. CVD methodology clearly allows for less discretion in the calculation of the duty (except in BIA cases), and methodologies do not differ by the makeup of a country's economy. This results in ADDs that can be inflated through discretion and CVDs that seem to be trapped by more rigid methodologies. My regression analysis of CVD data will show that discretionary practices, when in place,

yield higher duties, and that the simple lack of discretionary procedures is what holds CVDs in check.

3. Descriptive Statistics

A simple analysis of comparative descriptive statistics for ADD and CVD data clearly documents the recent departure of CVD action. Figure 1 has already established that CVD activity has dwindled in comparison to ADD activity. Figure 2 plots proportions of affirmative CVD and ADD cases since 1980. Except for three years since 1980, the probability of a CVD resulting from a petition has been lower than AD. The three years wherein CVDs were more likely than ADDs are clearly insignificant when we look at figure 3, which shows the total number of affirmative decisions for each type of duty. In the three years where a CVD seems more likely, there were less than five affirmative decisions. By fitting a line to the data in figure 2 we see that the probability of an affirmative CVD decision is practically horizontal at a little below 40%. AD, on the other hand, exhibits an increasing trend from a 60% to an 80% probability of an ADD resulting from a petition since 1980.

Another telling factor behind the appeal of AD to firms is the average duties resulting from an affirmative decision. Figure 4 uses data on country wide rates from affirmative cases to break down the average duty by year for both CVDs and ADDs. Country wide rates trade weighted averages of firm-specific duties for individual products. This will better represent the total amount of trade protection received by firms from an affirmative decision against a particular product. Both ADDs and CVDs display similar magnitudes from 1980 until 1986 with ADDs consistently a fraction above CVDs.

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As early as 1987 though, there is a striking departure from this early trend. The average ADD quickly begins to rise while CVDs vacillate between 0 and 25%. This trend continues until 1997 when the average ADD sharply declines from 120% to 15%. It is interesting to observe that even with this sharp decline in response to the Uruguay round agreements; the average ADD is still higher than its CVD counterpart. After 1997, AD quickly surpasses its previous pace and reaches a maximum average of 140% in 2004 with no sign of decreasing. Alongside the drastic climbing of ADDs, CVDs maintained their general average range between 0 and 25%. We do see a spike in average CVD in 2002 where the recorded duties averaged over 60%, but in light of the fact that there were only two affirmative duties that year, there is little significance in this observation. I also overlaid a three-year moving average for both CVD and ADD in figure 4 which smoothes the spikes between observations, and better demonstrates the steadiness of CVDs and the drastic climbing of ADDs.

It has been proven that BIA significantly increases ADDs.[5] I will show that BIA has a similar impact on CVDs. Interestingly, there is a shocking difference in the occurrence of BIA between the two. Figure 7 documents the proportion of cases where BIA played a part in the ITA's determination of a duty. I have used Blonigen's (2003) documentation of AD BIA up to 2000, and Michael Moore has provided me with the data through 2002. By juxtaposing this with CVD data that I have gathered from the Federal Register the dissimilarities in the trends of BIA become obvious. CVD's receiving BIA peak at around 35% of cases in 1988 and then drop into a static growth and decline that reaches a maximum at a little over 20%, but is steadily at or below the 15% level through

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[5] See Blonigen (forthcoming, a) and Moore (2005) for intensive analyses of this assertion.

2002. ADD displays a higher proportion of BIA every year from 1984-2002. Along with

consistently higher proportions, ADD BIA demonstrates a clear increasing trend

beginning in 1983 and reaching a maximum of about 50% in 1993. Following 1993

ADD BIA has fallen into a similar fluctuation pattern as CVD. The striking difference

between the similar patterns observed for CVDs and ADDs after 1993 is that BIA occurs

in a range of 30% to 45% of cases, triple that of CVDs.

4. A Model of Firms' Decision to File for Protection

It is common practice by the International Trade Association (ITA) to combine

CVD and ADD investigations when they are filed against the same product and exporting

country in conjunction. Figure 5 shows the total number of such cases per year. Until

1997 there is no obvious trend in alignment. There seem to be unpredictable peaks and

valleys. In 1997 there is an expected drop in the number of cases aligned corresponding

to the sharp decline in the number of cases filed overall this year. Following 1997 there

is an increase in alignment that is similar to the recovery of ADD filings. When

compared to the unpredictability of alignment in the years pre-1999, the systematic

decline we see from 1999-2004 is intriguing. AD filings are increasing in this period, but

corresponding CVD filings are declining. This leads me to believe that firms are

substituting out of CVD protection and into ADD, where in the past it was more common

to see the two types of protection filed together.

To further explain this trend, figure 6 looks at the probability of CVD and ADD

cases being aligned on a yearly basis by dividing the number aligned in that year by the

total number of cases filed. We see that since 1990 the proportion of CVD cases aligned

is consistently close to 1, except in 1997 where there was little trade protection activity

by the U.S., and no alignment. This trend in the probability of alignment demonstrated

by CVDs indicates that a firm filing a CVD consistently filed a corresponding AD claim.

The probability of an AD case being aligned is historically low in comparison. It shifts

between under 10% to a shade over 40% with no obvious trend until 1998. From 1998-

2004 there is a pronounced downward trend in the probability of alignment. This is

intriguing since we would expect that to file a CVD alongside an ADD is relatively

inexpensive since the fixed costs of filing have already been incurred. This indicates that

firms are substituting completely out of CVD with increasing regularity. The simple

model of a firm's filing decisions to follow will hypothesize as to why this substitution is

occurring.

Blonigen (forthcoming, b) develops a model that breaks down a firm's decision to

petition for AD protection. For relevance to our issue, I have ignored prior filing

experience (E) in his model. I have added the term R_j, which will capture the level of

retaliation a firm would expect in response to filing a petition against a particular country.

Prusa (2001) has shown that AD is spreading throughout the world, thus the threat of

retaliation is increasing which suggests that R_j is an increasing function with respect to

time. I assert that a firm's decision rule to file for AD protection can be modeled by the

following inequality,

$$\phi_j^A(Z_j)\, \pi_j^A(DM(Z_j),\, Z_j) + \phi_j^S(X_j)\, \pi_j^S(X_j) + \psi(X_j,\, Z_j) > FC_{ADD} + R_j$$

The set J includes each possible product and import source combination, and $j \in J$. An

affirmative or suspension decision following from a petition is denoted by superscripts A

and S respectively. $\phi(.)$ represents the probability of the indicated decision for some

country and product j. $\pi(.)$ is the expected profit from such a decision.

They are dependent on Z_j or X_j. Z_j represents the effects of exogenous factors, including petitioner characteristics, macroeconomic conditions, industry/product features, and the nature of rivalry between the petitioner and its competitors on the probability of an affirmative decision and the expected gains from such a decision.[6] X_j is Z_j's counterpart for suspension agreements. There may be differences in these variables since X_j would include additional factors affecting the likelihood of a firm accepting a suspension agreement such as bargaining position (Blonigen (forthcoming, b), 4). DM(.) is the expected dumping margin from an affirmative decision. FC_{ADD} represents the costs faced by a firm to file for AD protection in a particular period. It includes the fixed administrative costs of filing. "Finally, $\psi(.)$ represents the expected discounted net benefit in future cases from filing this particular case and is assumed to be identical across j products (Blonigen (forthcoming, b), 5)."

For an explanation of the many scenarios represented in this model see Blonigen (forthcoming, b). For the purposes of this paper I will assume functional characteristics as suggested by the data. Since R_j is nondecreasing by assumption, and we see that the number of AD petitions have remained at a robust level from 1980-2004, save for a select few periods as shown in figure 1, it must be the case that the left side of the equation is increasing to match the increase in filing costs otherwise we would see a decrease in filings. Therefore, I assume DM(.) is an increasing function, which implies $\pi_j^A(.)$ is also increasing. We also observe that the probability of an affirmative AD decision is increasing over time suggesting that $\phi_j^A(.)$ should be a nondecreasing function. These

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[6] See Knetter, Prusa (2003) for a discussion of external factors affecting AD decisions and margins.

assumptions are clearly supported by ADD descriptive data and previous analyses of

ADDs. It is most likely the case that the observed increases in the expected probability

of an affirmative decision and expected gains from such a decision are leading to an

increase in expected profit from a suspension decision. This would arise from a foreign

firm's increasing willingness to negotiate for a suspension in order to avoid a dramatic

ADD.

A model for a firm's CVD filing decision would look similar to that of a firm's

ADD decision.

$$\gamma_k^A(Z_k) \, \rho_k^A(CVD(Z_k), Z_k) + \gamma_k^S(X_k) \, \rho_k^S(X_k) + \psi(X_k, Z_k) > FC_{CVD} + R_j$$

The set K includes all possible import country combinations for CVDs. $K \subseteq J$ since

CVDs are not filed against nonmarket economies, and $k \in K$. $\gamma_k(.)$ is the probability of

the superscript indicated result. $\rho_k(.)$ indicates the expected profits from an affirmative or

suspension result. CVD(.) is the expected CVD from an affirmative decision. All other

variables are assumed to be identical to their description in a firm's ADD decision. This

is reasonable for Z_k and X_k since they are endogenous factors. I will expand the meaning

of R_j to the the expected threat of CVD or AD retaliation in a given period. This will not

harm our AD analysis since CVD law has no influence on a firm's decision to file an

unaligned AD. Also, the data suggests that CVDs occur in paltry numbers throughout the

world, and are not spreading like AD. Thus, I will make the assumption that the

retaliation a firm should expect in the form a CVD is relatively close to zero, and not

increasing. It is key for my analysis to point out that R_j is increasing even though

retaliation in the form of a CVD is near zero. I am making this assumption because it is

possible that retaliation to a CVD may occur in the form of an ADD, thus a firm must

take this into account in their decision to file for protection. My hypothesis is that the left side of the inequality is not increasing, thus the increasing of R_j is leading to a decline in CVD filings. The data shows that CVDs, when affirmative are not fluctuating very much over time, thus the expected profits from an affirmative CVD decision remain constant over time. We also see that the probability of an affirmative decision is unpredictable and its expected value[7] remains relatively constant over time. This creates a scenario where the threat to a foreign firm from an affirmative CVD is unchanging over time, thus their likelihood to negotiate for a repeal of CVD action through suspension agreement will also remain relatively constant. Also, since a foreign firm's gains from avoiding a CVD are constant, the expected gains to a domestic firm will not fluctuate over time. The data supports these claims, which demonstrate that the stability of CVD gains cannot match the increase in CVD filing, thus more and more firms are not filing for CVD protection.

We would expect that there would exist some constant decrease in filing costs (FC_{ALIGN}) if a firm were to align AD and CVD petitions. Based on the results from the CVD decision model it is not surprising that firms would almost exclusively petition for a CVD only if they can align it with an AD petition. By combining the models for a firm's choice to file an AD and a CVD, we can hypothesize as to why the recent trend for firms who file an AD have chosen not to align it with a CVD. The left side of the equation is the sum of the two left sides of the two decision rules. The right side is the sum of the two file costs minus some constant quantity, FC_{ALIGN}. The costs of filing for an ADD and CVD petition are different since different data about imports must be gathered.

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[7] Represented by the overlaid best-fit line in figure 2.

Namely, CVDs require government specific data not necessary for ADD calculation, and ADDs require firm specific pricing data unneeded for a CVD. It is still reasonable to assume some decrease exists in the filing costs since some data is necessary for both cases, and there would be a decrease in the administrative startup costs for one of the duties. For a firm on the margin of filing for CVD protection, the decrease in filing costs would be just the incentive needed to file. This explains the high percentage of CVDs filed being aligned in recent years. Between 1985 and 1990 it was not as rare of an occurrence to see a CVD filed independently (on average about 50%), and before 1985 it was a rarity to see CVDs aligned. Our CVD model suggests that the fall in CVD filing is due to the stability of the gains from a CVD making them unable to match increasing filing costs. In the years before 1985 in our sample filing costs were low relative to later years. Thus, fewer firms were on the margin and did not need the incentive of alignment to file a CVD petition. As we move forward in our sample the expected gains from a CVD have remained constant and filing costs have increased, which has pushed more and more firms to the margin, and firms on the margin below. By the end of our sample, almost every firm has been pushed to, or below, the margin and we see strikingly few CVD cases being filed. The ones that are filed are predominately aligned with an ADD to capture the decrease in filing costs that have become necessary to motivate them to petition.

We see a relatively high probability of an ADD case being aligned before 1986. In this early portion of our sample, expected ADD gains were low relative to later years, and R_j was also relatively low. Thus, more firms considering a petition for ADD protection were on the margin, and the decrease in filing costs from alignment pushed them over. In

later years the majority of firms are not on the margin of filing an AD case due to the increases in their expected gains from petitioning. Thus, the period from 1986 to 1997 shows the beginning of the increase in firms choosing to substitute completely out of CVD in favor of independent AD action. This period represents the establishment of the climbing in expected ADD gains, and the overshadowing of CVDs by filing costs. The fluctuation of alignment of ADDs during this period can be explained by the existence of many firms on the margin for both ADD and CVD. These marginal firms are sensitive to the decrease in filing costs from alignment and minimal changes in their expected gains, and file sporadically.

Moving to the end of the sample, ADD gains have climbed drastically, and CVDs are overshadowed by filings costs. Now we begin to see a steady downward trend in the probability of ADD cases being aligned. The state of the average firm's decision is that they are well above the margin of filing for ADD protection, and well below the margin for a CVD. Thus, the compensation a firm receives through decreased filing costs is no longer enough to motivate them to align their AD petition with a CVD. Our model shows that as perceived costs associated with filing for protection increase over time due to fear of retaliation and legal changes, CVD returns do not keep pace, and are thus being phased out by the majority of firms. We wonder why it is that CVDs do not follow the recent trend of yielding large duties similar to what is shown by ADDs.

5. Methodology

One possible hypothesis to explain the difference between CVD and ADD magnitudes is that subsidization does not distort trade as much as unfair prices, thus CVDs are expectedly lower than ADDs. My hypothesis is CVDs cannot be inflated

because of their inherent differences from AD. The myriad of discretionary practices that have been shown to inflate ADDs simply do not exist in CVD law. Thus, CVDs remain miniscule in comparison to ADDs even though a desire to realize a degree of protection similar to that of AD may lie beneath the surface.

Blonigen (forthcoming, b) has shown that the recent trend of large ADDs can be attributed to the evolution of discretionary practices within the ITA. I will demonstrate that even though CVDs are administered by the same agencies as ADDs, their discretionary practices are paltry in number, and do not display any significant trends. To test this theory I have compiled data on each CVD case since1980 as reported in the Federal Register. I have data on preliminary, final, and amendment to final ITA determinations for each CVD case resulting from a petition. The magnitude and makeup of each duty is recorded along with the specific firms investigated, product under investigation, and any discretionary practices used. For my analysis, I am only concerned with duties generated by the ITA and factors that significantly affect their magnitude. Thus, I will only use the ITA's final determination of firm specific CVDs in my regressions. After discarding preliminary decisions and cases where there are inordinately high CVDs[8] or CVDs not recorded in percentage form, and cases against nonmarket economies that were carried out to establish the precedent of attributing no duties to these countries, I am left with nearly 1000 observations.

I believe CVDs can be explained as a function of their case specific attributes. The attributes making up a CVD case are identical to those of ADD. Thus, I will be adhering

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[8] For example ITC cases Iran-2,3 reesulted in final duties above 300% ad valorem. The next highest duty recorded is a little greater than 100%. See Federal Register case 51 FR 35679 and 52 FR 41605 for details of the two cases, respectively.

to the methodology set forth by Blonigen (forthcoming, a) in order to decompose the

factors affecting CVDs in a similar manner. The differences between our analyses are

dictated by the inherent differences between CVD and AD cases. I have created dummy

variables indicating the country or region of origin for each case, the product under

investigation, and the existence of discretionary practices used. The countries and

regions I will use in my regressions to control for country effects on CVDs are the

primary regions targeted by petitioners; 1) Canada, 2) Mexico, 3) Turkey, 4) Other Latin

America, 5) European Union, 6) Korea, 7) Taiwan, and 8)Other Asia.[9] A key difference

between CVDs and ADDs becomes clear in this simple categorization of countries of

interest. The departure between between the two lies in the main countries targeted by

the two different types of duties. Blonigen (forthcoming, a) was rightly interested to

study the effect of residence in a nonmarket economy had on the ADD received by firms.

He found that a significant increase in the ADD received resulted in cases where the

subject firms exported from a nonmarket economy. Nonmarket economies are not

subject to CVD action. The result is that major exporters to the U.S., such as China and

USSR/Russia, are not involved in CVDs.[10] "Rest of the World" is the excluded category

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[9] "Other Latin America" is comprised of countries from the region, besides Mexico, that
have been subject to CVD action. They include Argentina, Brazil, Chile, Colombia,
Costa Rica, Ecuador, El Salvador, Peru, Trinidad & Tobago, and Venezuela. Similarly,
"Other Asia" consists of Australia, Bangladesh, India, Indonesia, Malaysia, New
Zealand, the Philippines, Singapore, and Thailand. The European Union is made up of its
members, taking into account their date of entry.

[10] Instead, we see the inclusion of Turkey, which is not generally considered a major trade
partner with the U.S., but as it pertains to CVD action, Turkey has seen a substantial
number of cases filed against them. It is interesting to note that Hong Kong and Japan,
which are major trading partners with the U.S., have not been subject to any CVD action,
and will therefore not be included in my regression analysis. If it is the case that the
governments of China and Japan are historically not subsidizing exporters, this

and consists of countries and regions such as Israel, South Africa, East European countries, and Scandinavian countries.

To analyze the fixed effects of the type of product being investigated on the final CVD received, I have created dummy variables for the products making up the majority of CVD cases. The indicator variables will include, 1) Pipes and Tubes, 2) Steel[11], 3) Chemicals, 4) Food, 5) Chemicals, and 6) Textiles and Apparel. I will also include dummy variables indicating each cases occurrence in regard to the 1984 and 1988 trade acts and the implementation of the Uruguay Round agreements to control for the effects of the resulting legal changes.

I will be using a BIA dummy to establish the effects of discretionary practices on CVDs. BIA practices consist of the ITA's use of facts available and adverse facts available. Adverse facts available is the use of BIA in "the most adverse possible way." In practice, however, there is little difference in the administration of facts and adverse facts available, therefore BIA will indicate the use of either one. An interesting occurrence in the CVD data is the existence of a set of cases against countries that were not signatories of the WTO at the time of the investigation. In these cases no ITC injury determination was required in the attribution of a CVD. We would expect this to perhaps yield higher CVDs as punishment for not being a part of the WTO if discretion was present in CVD calculation. I have indicated these cases with the dummy variable "no injury" to see if in this scenario the ITA used some undocumented discretion to inflate these duties. I will also include a trend variable which takes on the value of "1" for 1980

occurrence may lend itself to the hypothesis that CVDs are not being generated to protect domestic producers when no threat exists.

[11] "Steel" includes products such as steel plate, bars, sheet and strip.

and increases incrementally by year. This will be used to control for any time related change in CVDs. I will also interact BIA with the trend term to see if there is any significant trend with the ITA's use of this discretionary practice.

7. Regression Analysis

To establish the significance of discretionary practices on the overall CVD rate, I initially regressed the final observed duties on the dummies for BIA and "no injury". I also included trend, trend squared, and trend cubed to capture any consistent change in CVDs over time and account for the nonlinear fluctuations of CVDs.[12] My base regression, as well as the regressions to follow, implemented a White's correction to account for heteroskedasticity that is present in my data due to it being time series data. The R-squared term for my base regression was a respectable .22. As expected, BIA was significant and positive. Holding all else constant, BIA use leads to an increase of over 19% for final CVDs. This is a profound increase when we take into account the average CVD is around 7.9% for final determinations. All trend terms were significant, and represent the yearly fluctuations of CVDs. These terms show an increasing trend in CVDs beginning at 2.76% in 1980 and reaching a maximum of 11.04% in 1989. Following 1989, the trend terms show a downward trend in duties until a minimum of 7.54% is reached in 1999. After this minimum, the trend of CVDs begins to increase again and reaches 10.37% at the end of our sample. The most shocking result of this regression came from the "no injury" dummy. This variable was significant and negative. This rejects my hypothesis that inflated CVDs occur in a case against countries

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[12] The nonlinearity of CVDs is clear from figure 4.

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that were not members of the WTO. This indicates that the ITA is not inflating duties

against these countries. One possible explanation is that there is in fact no malevolence

within the USDOC, and subsequently no desire for the ITA to inflate duties against these

countries. Another possibility is that although there is motivation for the ITA to hike up

duties against these countries, there is not enough discretion that can be used in the

calculation of CVDs for the purpose of manipulating them.

To determine if the results of my base regression are valid or if they are instead

explainable by other factors I included country and product specific dummies in my

model. I began with the inclusion of country specific dummies. The explanatory power

of this model increased slightly, yielding an R-squared of .28. BIA remained significant,

and its magnitude only experienced minor changes. "No injury" cases became significant

at the 1% level, and remained negative. Interestingly, by controlling for country/region

effects on CVDs "no injury" nearly doubled in magnitude giving the aforementioned

hypotheses more support. With the exception of the trend cubed variable, the trend

variables remained significant and their terms were similar to my base regression. The

occurrence of the trend cubed term losing significance in my model suggests that some of

the nonlinear fluctuations in final CVDs can be explained by the country/region of origin

for a case. Certain regions had a statistically significant effect on final CVDs.[13] Since

CVDs are based on government subsidies and depend on the makeup of a particular

country's trade policies, the effects we see from certain countries on CVDs cannot be

attributed to discretionary practices being used to perpetuate bias or favoritism toward

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[13] The results are documented in table 1.

particular countries.[14] This differs from ADDs insofar as ADDs are determined based on firms' behavior. Thus, the increases documented by Blonigen (forthcoming, a) for the ADDs of firms from nonmarket economies, for example, is most likely due to the ITA's use of discretion in such cases. An important finding in Blonigen's (forthcoming, a) analysis was the evolution of discretionary practices in AD cases. By interacting discretionary practices with his trend term he found and increasing trend for the effect of some of these practices. Namely, he found BIA's impact on the final duty was increasing significantly over time. When I include a BIA and trend interaction variable in my model for CVDs, it is insignificant and its sign is indeterminate. Thus, it can be concluded that BIA is not evolving over time in CVD cases.

Blonigen (forthcoming, a) found in his model of ADDs that the implementation of the Uruguay Round, when controlling for other trade acts and similar case specific qualities in ADDs as CVDs, significantly decreased ADDs. Thus, since the same trade acts and the Uruguay Rounds also affected CVD law I would expect a similar result in my model. When I include dummies indicating a cases occurrence in regard to the 1984 and 1988 trade acts, and the Uruguay Rounds, not only were they insignificant, but they made the trend variables insignificant. This suggests the existence of multicolinearity between the trend variables and trade acts. Indicating that the introduction of these well-known trade acts when controlling for other factors did not significantly affect CVDs, since their effects can be explained by the trend variables.

Next I regressed CVDs on product controls instead of country dummies.[15] The results were similar to that of my regressions with the inclusion of country dummies. The

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[14] The result of "no injury" cases on final duties lends itself to this hypothesis.
[15] The results are documented in table 2.

trend terms remained significant. Although the trend terms took on different magnitudes than those of my base regression when we take into account the difference in the constant term their effects are relatively the same. BIA remained significant. Its coefficient decreased by about 2% indicating that some of the effect of BIA cases can be explained by controlling for the type of product. "No injury" remained significant and negative without changing much from my base regression. This indicates that the cases making up this group have a fair amount of product differentiation since their effect is not affected when we control for product. The R-squared value increased only slightly over my base regression. Thus, controlling for product effects adds little to our ability to explain final CVDs, and is not as effective as controlling for country effects. This is a reasonable occurrence since the magnitude of CVDs is calculated to counteract the effect of government specific programs. Therefore, we would expect that the variation in CVDs would be explained better by controlling for different countries since subsidization depends more on government's policy than whether certain products, not taking into account government policy, generally receive different rates of subsidization. The next step to explaining final CVDs is to control for country and product effects along with discretionary practices.

My final regressions included all controls.[16] The trade acts have been consistently insignificant so I excluded them in my first regression. R-squared went up to .30 signifying that this model has more explanatory power the previous regressions. The key variables for my analysis, BIA, "no injury", and trends, remained significant. In order to see if controlling for all possible observable case specific attributes affected the

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[16] The results are documented in table 3.

significance of the trade act variables I included them in my final regression. This added

nothing to the explanatory power, and decreased the significance of the trend terms to the

10% level. This collateral impact of including all dummies is well worth the

completeness of case specific factors represented in this model. We see that BIA has

changed very little from the base model. Its significance and magnitude are a valuable

indication of the effect of the ITA's use of discretion on final CVD rates. The trend terms

explain the nonlinear systematic fluctuations in CVDs. The changes we see in their

coefficients indicate CVDs increase and decrease in the same fashion as explained in the

base regression section. However the changes in coefficients suggest the peak in the

trend increase of CVDs occurred in 1988 where it reaches a maximum of 12.16%. The

trend then decreases until 2000 in this model, and reaches a minimum of 7.6%. From

then until the end of the sample in 2004 there is an increasing trend in CVDs ending at

10.37%. The interaction term of BIA and trend was, as in all other regressions,

insignificant. Indicating that there is no systematic change in the effect of BIA use on

CVDs. It is important to note Blonigen's (forthcoming, a) findings in his study of ADDs.

He found the use of BIA led to a 30-32% increase in ADDs after controlling for similar

factors. He also found that there existed an increasing trend in the effect of BIA on

ADDs suggesting that discretionary practices were evolving over time. This difference is

key to understanding the differences between ADD and CVD magnitudes. "No injury"

remained negative and significant in my model. Its coefficient decreased to –4.25%.

This result stands as a demonstration that excluding the use of BIA discretion probably

does not play much of a part in the ITA's CVD calculations. Certain country/region and

product dummies were significant. It seems clear that unless BIA is attributed to a case

the ITA is not using discretion to influence CVDs, thus significant coefficients for certain countries/regions and products suggests that these areas and products are being subsidized at different rates than others.[17]

8. Conclusion

In comparison to its volatile counterpart, AD, CVDs seem dull in nature. They yield consistent rates, and do not fluctuate as much as ADDs. I have argued that the predictability and stability of CVDs is due to the lack of programs allowing the ITA to use discretion in their calculations and the inexistence of an increasing trend in the program employed. ADDs are administered quite differently. There are many methodological outlets for discretion along with a plethora of programs frequently invoked that yield higher duties.[18] In accordance with the existence of these programs, there is a documented trend increasing the effect of these practices on ADDs. Thus, we see boisterous duties and not surprisingly a consistently high number of ADD cases. It is no wonder that scholars of late have been enticed more into studying AD than CVD practices and consequences. CVD law is rigid, and has undergone little change since 1979. The changes it has undergone through well known trade acts I have shown led to statistically insignificant affects in the final CVD rate. A possible demonstration of CVD law suppressing CVDs occurs in the existence of a set of cases against countries, which were not members of the WTO. I would have expected that if the ITA could manipulate CVDs, increased duties would occur in this set of cases. In fact, these cases actually

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[17] The impact of country/region and products on CVDs when controlling for the other discussed factors are documented in table 3.

[18] Consult section 2.2 for descriptions of these programs, and Blonigen (forthcoming, a) for evidence of the effects of these programs on ADDs.

exhibited decreased duties leading me to believe that CVDs are accurately representing what has been deemed necessary to counteract the harm of foreign subsidization to the domestic producers.[19]

It came as no surprise that when the ITA is allowed to relax the strict methodologies in CVD calculation through BIA there resulted in a significant increase in CVD rates. Although the effect of BIA seems like an enticing prospect to domestic firms, the lack of a significant trend driving BIA's effect on CVDs lends itself to explain why firms most likely view expected gains from a CVD unchanging. BIA seems trapped by precedent and methodology since it has not evolved over time. The data used in this paper to establish the effect of BIA on CVDs did not account for the differences that may exist in the two programs making up BIA. I would like to separate these two programs in further analyses of CVDs to more thoroughly establish the effect of this practice on final CVDs. Even in light of this shortcoming, my regressions show CVDs are fairly accurately explained by case specific data, and the results of these regressions support my hypothesis from section 4 that firms are substituting away from CVDs because their expected gains are approximately unchanging from period to period.

It may be the case that discretion manifests itself differently in CVD cases than AD cases. It seems from the description of AD calculations[20] that inflations in ADDs occur when the ITA is forced to make inferences about the magnitudes of values in their duty calculations. Except for the case of BIA, the values necessary to calculate CVDs are provided to the ITA. Instead discretion may be occurring in the types of programs the

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[19] Whether or not what the ITA deems necessary to counteract subsidization is correct (as addressed by Anspacher et. al. (1991)) is a separate issue.
[20] See section 2.2 ADD Calculation.

ITA analyzes for subsidization. For instance the benefit of exchange rate programs granted to exporters are more difficult to observe and complicated to calculate in comparison to direct subsidies such as equity infusions. Further research to determine the effect on final CVDs of programs such as these on the ITA's duty calculations would be intriguing. My database documents the types of programs determined by the ITA to make up each duty. This lends itself to an analysis of the effect of particular programs on CVDs, and one could analyze the makeup of the average CVD in order to determine if there is a trend of these programs existing in particular cases.[21] Consider the possibility that the ITA is searching for programs such as exchange rate programs more rigorously when a case is against a large trading partner. If the ITA manifests discretion in CVD cases by digging deeper for programs in cases against large trading partners, the negative coefficient we observed in "no injury" cases may be explained by further research. If it were demonstrated that these countries who were not part of the WTO at the time of their investigation accounted for a relatively small amount of U.S. imports, and a lower number of programs that are more difficult to observe and calculate occurred, one could argue that the ITA is behaving differently on a case by case basis. It would also be interesting to further investigate BIA practices in CVD. There are obviously many interesting avenues of research to shed more light on CVDs in the pursuit of further unraveling the forces driving this trade practice.

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[21] The database could also effectively be used to address concerns put forth by Anspacher et. al. (1991). The authors demonstrated that CVDs counteracting domestic subsidies as calculated by the ITA most likely frequently over estimate the actual duty needed. Determining the proportion of CVDs made up by domestic subsidies would substantiate the level of their concerns.

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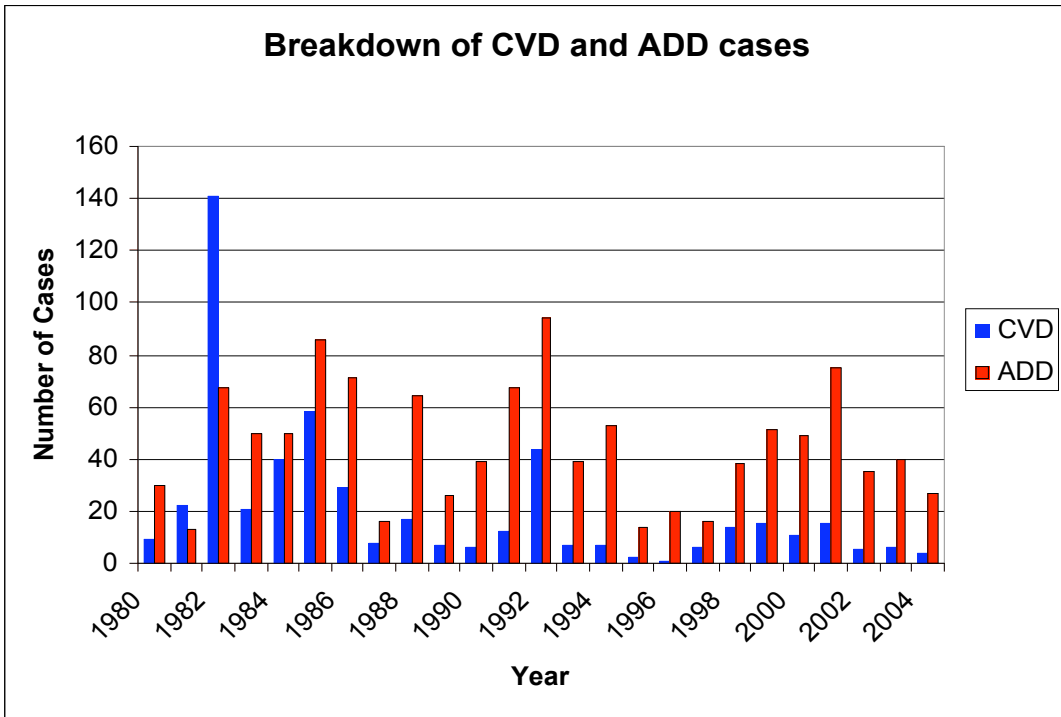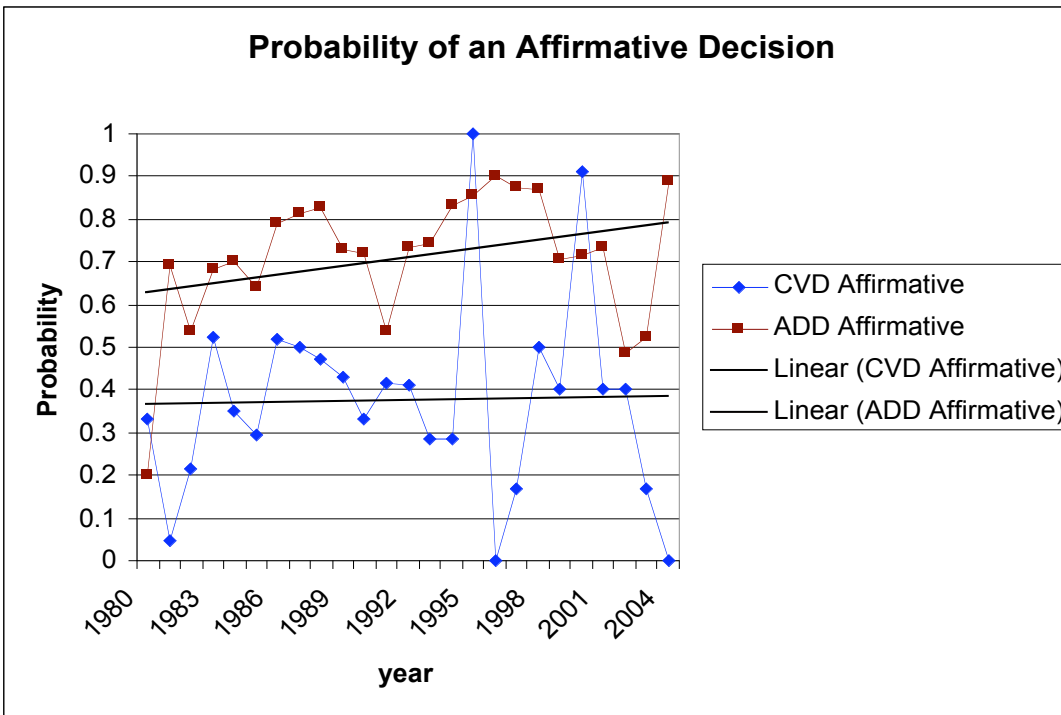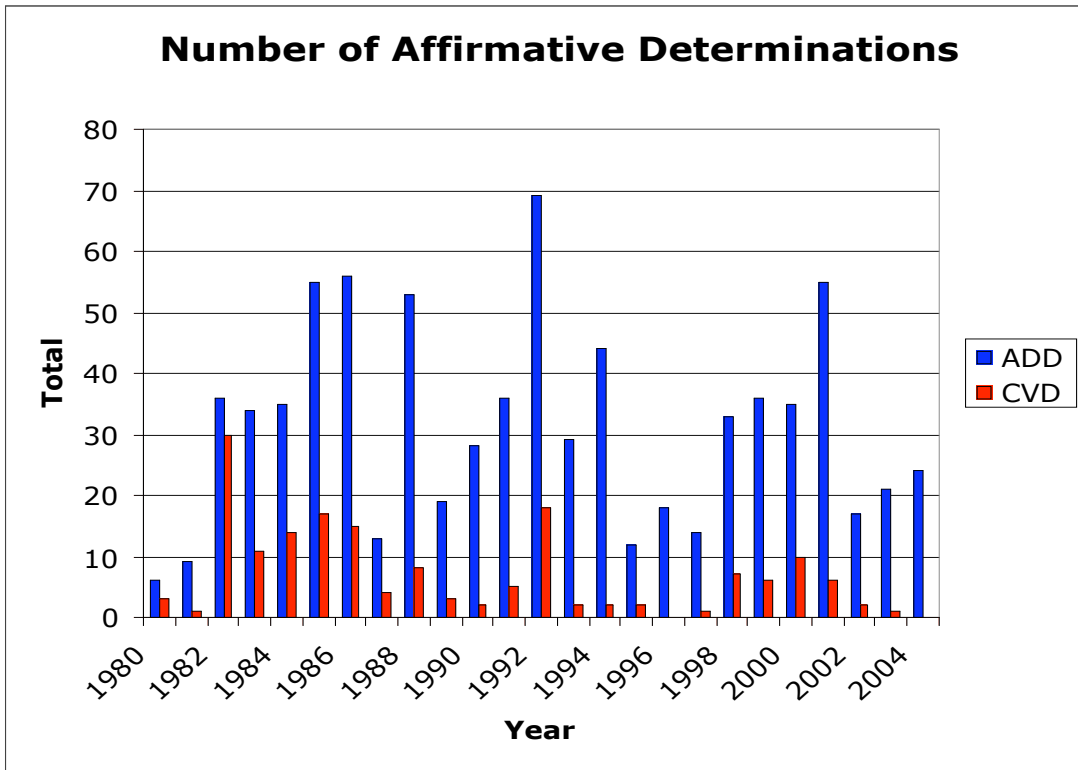
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Figure 1:

Figure 2:

Figure 3:

Number of Affirmative Determinations

Figure 4:

Average Duty

Figure 5:

CVD cases aligned with ADD
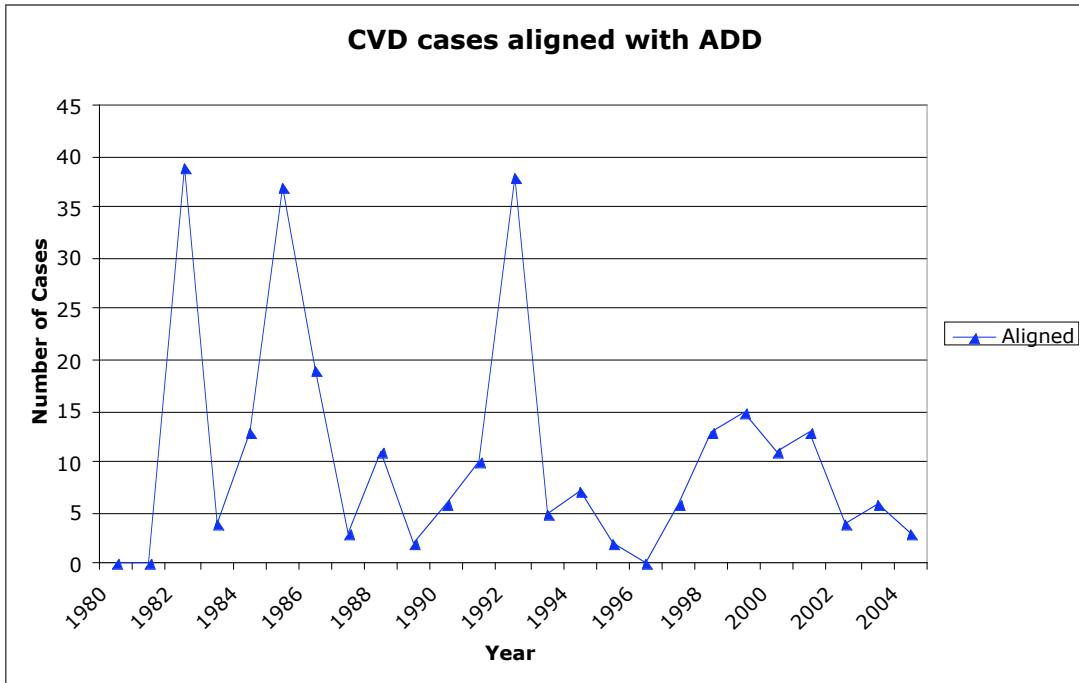
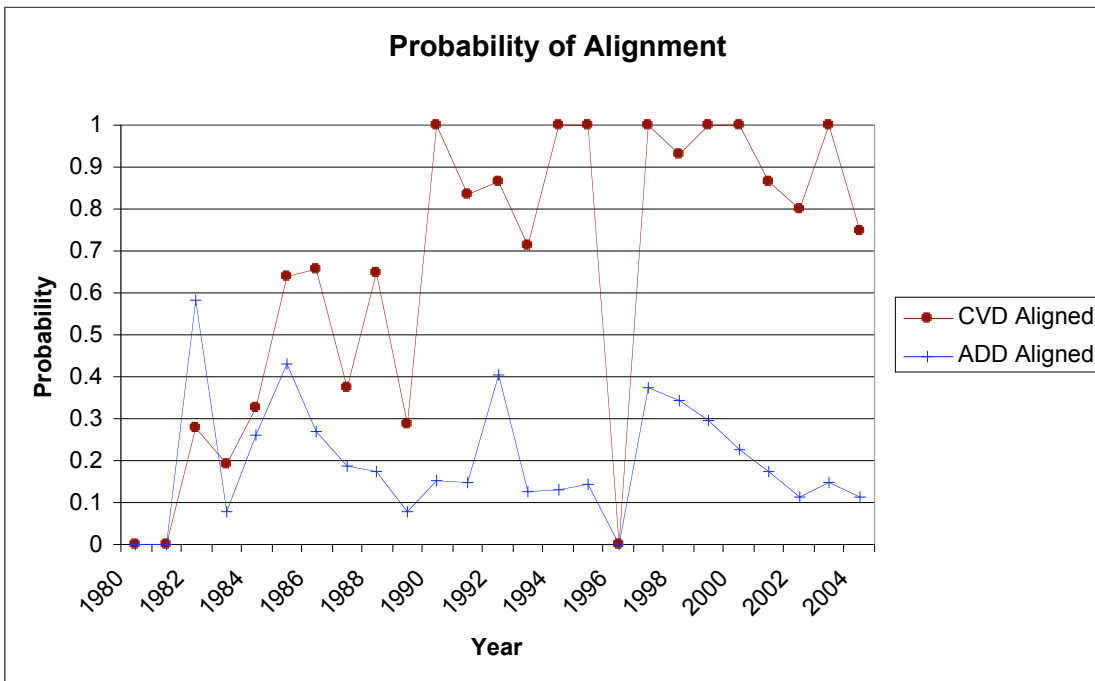**Figure 6:**

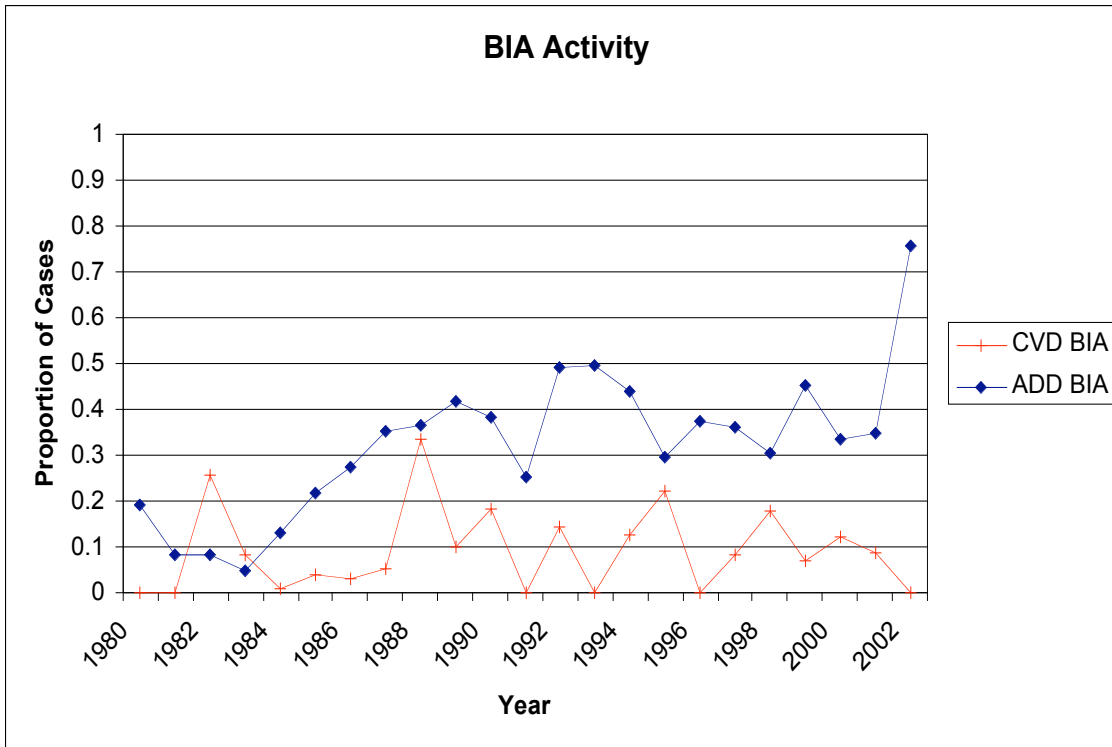Probability of Alignment
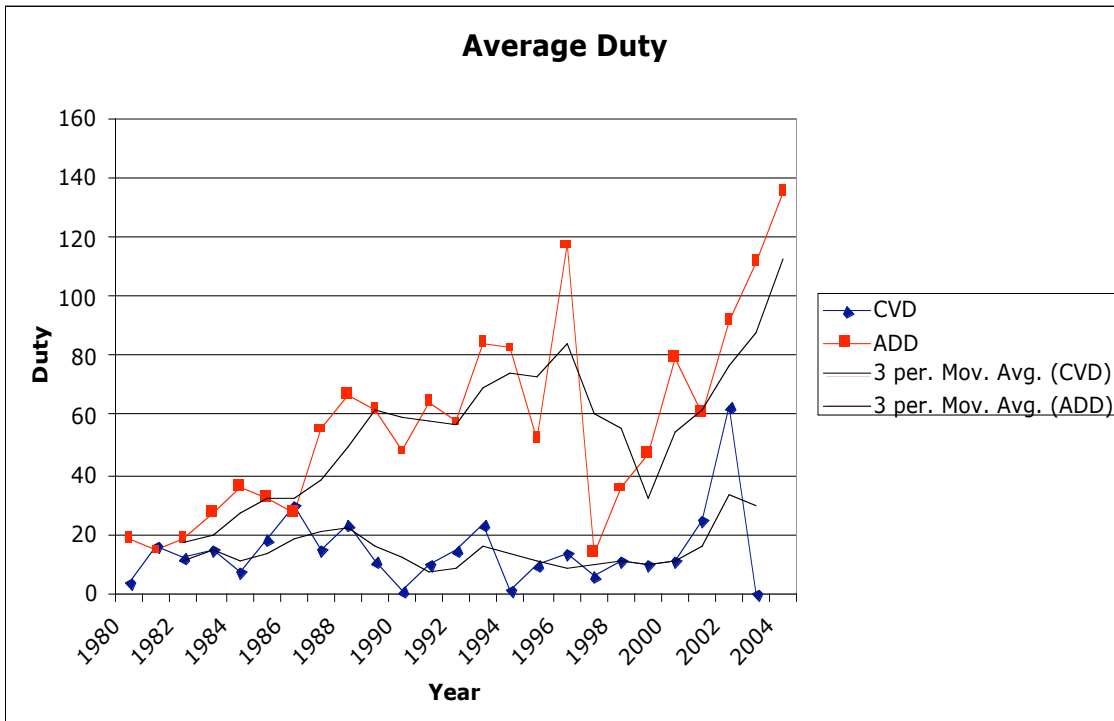
Figure 7:

Table 1: Regressions of final CVDs on Country Dummies

Independent Variables	Base Regression	Inclusion of Country specific dummies	Inclusion of Country and Trade Act specific dummies
Trend	3.000	1.818	1.571
	(0.823)***	(0.759)**	(1.549)
Trend Squared	-0.251	-0.137	-0.155
	(0.076)***	(0.067)**	(0.154)
Trend Cubed	0.006	0.003	0.004
	(0.002)***	(0.002)	(0.004)
No Injury	-2.712	-4.708	-4.557
	(1.090)**	(1.648)***	(1.681)***
BIA	19.701	19.554	18.837
	(1.195)***	(2.892)***	(2.773)***
Canada		3.687	3.034
		(3.372)	(2.810)
Mexico		3.867	3.775
		(2.124)*	(2.105)*
EU		-0.326	-0.350
		(1.083)	(1.075)
Turkey		4.476	5.357
		(1.635)***	(1.658)***
Korea		-1.737	-1.923
		(1.108)	(1.085)*
Taiwan		-4.166	-3.388
		(0.964)***	(1.101)***
Other Latin America		9.396	9.182
		(1.572)***	(1.498)***
Other Asia		3.702	3.296
		(1.871)**	(1.806)*
BIA*Trend		0.064	0.106
		(0.238)	(0.237)
1984 Trade Act			-0.201
			(2.433)
1988 Trade Act			3.583
			(4.326)
Uruguay Rounds			-2.311
			(3.571)
Constant	-2.911	-1.293	0.073
	(2.358)	(2.432)	(3.574)
Observations	1000	987	987
R-squared	0.22	0.28	0.29
Standard errors in parentheses			

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

Table 2: Regressions of final CVDs on product specific dummies

Independent Variables	Base Regression	Inclusion of Country specific dummies	Inclusion of Country and Trade Act specific dummies
Trend	3.000	2.846	5.953
	(0.978)***	(0.856)***	(2.379)**
Trend Squared	-0.251	-0.236	-0.560
	(0.086)***	(0.074)***	(0.217)***
Trend Cubed	0.006	0.005	0.014
	(0.002)***	(0.002)***	(0.005)**
BIA	19.701	18.140	17.013
	(2.393)***	(3.032)***	(2.815)***
No Injury	-2.712	-2.265	-2.743
	(0.955)***	(1.075)**	(1.212)**
Pipes & Tubes		1.274	1.853
		(1.483)	(1.737)
Steel		0.427	0.798
		(1.130)	(1.027)
Chemicals		2.658	3.545
		(1.716)	(1.796)**
Food		-3.314	-4.413
		(1.174)***	(1.594)***
Textiles and Apparel		-2.093	-0.006
		(1.256)*	(1.947)
BIA*Trend		0.173	0.218
		(0.244)	(0.244)
1984 Trade Act			-3.790
			(3.500)
1988 Trade Act			6.537
			(5.334)
Uruguay Rounds			5.770
			(4.682)
Constant	-2.911	-2.838	-9.018
	(2.763)	(2.414)	(5.560)
Observations	1000	1000	1000
R-squared	0.22	0.23	0.24

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3: Regressions of final CVDs on all dummies.

Independent Variables	All Dummies except Trade Acts	All Dummies
Trend	1.999	3.682
	(0.714)***	(1.935)*
Trend Squared	-0.150	-0.334
	(0.063)**	(0.175)*
Trend Cubed	0.003	0.008
	(0.002)*	(0.004)*
BIA	19.126	18.486
	(2.931)***	(2.771)***
No Injury	-3.969	-4.254
	(1.464)***	(1.552)***
Canada	5.432	4.628
	(3.343)	(2.900)
Mexico	4.469	4.538
	(1.735)**	(1.745)***
EU	0.386	0.344
	(1.022)	(1.052)
Turkey	6.087	6.093
	(1.964)***	(1.997)***
Korea	-1.590	-1.626
	(1.050)	(1.045)
Taiwan	-2.739	-2.250
	(1.002)***	(1.108)**
Other Latin America	10.136	9.889
	(1.510)***	(1.456)***
Other Asia	4.530	4.191
	(1.628)***	(1.603)***
Pipes & Tubes	1.232	1.513
	(1.580)	(1.787)
Steel	1.954	2.059
	(1.005)*	(0.990)**
Chemicals	2.758	3.109
	(1.563)*	(1.681)*
Food	-4.048	-4.559
	(1.264)***	(1.658)***
Textiles & Apparel	-1.941	-0.907
	(1.099)*	(1.745)
BIA*Trend	0.091	0.114
	(0.240)	(0.239)
1984 Trade Act		-1.878
		(3.068)
1988 Trade Act		4.150
		(4.688)
Uruguay Rounds		3.152
		(4.325)
Constant	-3.575	-6.693
	(2.378)	(4.767)
Observations	1000	1000
R-squared	0.30	0.30
Robust standard errors in parentheses		
* significant at 10%; ** significant at 5%; *** significant at 1%		