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#### PARTISANSHIP AND ANTIDUMPING†

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#### Abstract

This paper empirically examines the influence of political partisanship on antidumping protection, which has become the most frequently used contingent trade remedy in the last 20 years. First, we show that the number of antidumping initiations from the labor intensive industries increases when there is a left-wing government in power. In addition, the evidence on the governments' decision to impose antidumping duty demonstrates that the increase in the leftist orientation of the governments is associated with an increase in the likelihood of an affirmative antidumping outcome from the petitions of labor intensive industries. Although antidumping is an administrative protection which includes a set of necessary procedures and rules to follow, our findings clearly points out the political bias in AD actions in the form of partisan preferences.

Keywords: Antidumping, Political Ideology, Partisan Trade Policy, Administrative Protection

JEL Codes: F13, F14

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#### 1. Introduction

To date, the role of political ideology in the choice of economic policy instruments has received serious attention. Many of the existing studies suggest that in a democratic regime, political parties which compete for electoral votes try to adopt policies in favor of their electoral base. Hence, it is the constituents' interests which determine the ideological attitude of the governments. Generally, the political party that is in the left ideological spectrum represents workers, whereas the right-wing represents capital owners.<sup>3</sup>

Trade policy is one of the policy instruments, which enables a political party to differentiate itself from others to compete for votes. The redistributive consequence of the trade policy is the pivotal argument of the political economists who have emphasized the partisan-based trade policy. For instance, Milner and Judkins (2004) investigate the relationship between "class cleavage based partisanship" and "trade policy" of a political party and find that left-wing parties in advanced industrial countries adopt more protectionist policies compared to the right-wing parties. Focusing on US trade policy between 1877 and 1934, Epstein and O.Halloran (1996) showed that Republicans raised the tariffs, while Democrats cut them. Rogowski (1989, pp. 98) predicts that in countries, such as United States, Canada, Australia and New Zealand, which are capital rich, left-wing parties should be protectionist. By combining the political support function of Hillman (1989) with Stoper-Samuelson theorem, Dutt and Mitra (2005), henceforth (DM), show that left-wing governments are protectionist in capital abundant countries, whereas they are

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<sup>&</sup>lt;sup>3</sup> See Hibbs (1977), Alesina(1987), Hibbs, Rivers and Vasilatos (1982), Pinto and Pinto (2008)

compared pro-trade labor abundant countries when to their rightwing counterparts. Further, Krever (2008)highlights the impact of partisan preferences on the government's decision to form preferential trade agreements. His results indicate that independent of its factor endowments, a country is more likely to form preferential trade agreements when there is a rightwing government in power.

Whether the political ideology of the governments affect the trade policy in the countries has been widely examined, but nothing is known about the effect of partisan preferences on antidumping, the most implemented non-tariff barrier over the years. In this paper, we exploit the three-digit ISIC industries' trade and production data to analyze the effect of political ideology on antidumping filings and the governments' decision to impose AD duty. In this regard, this study represents the first attempt to integrate antidumping in a study of partisan trade policy.

Limited to developed countries until the late 1980s, the use of AD has increased worldwide over the past decade especially after the sharp tariff cuts countries experienced with World Trade Organization's inception in 1995. According to Bown (2008), more than 40 members of the World Trade Organization have become active users of AD. Aggarwal (2007, pp.151, 152) notes three possible perspectives for the rationale behind the proliferation of AD: the political perspective, the political economy perspective, and the economic perspective. The first two argues that AD is a GATT/WTO legal trade remedy used to provide protection to the domestic firms which is injured by the imports of their foreign competitors. On the other hand, the last one argues that AD is a policy which aims to prevent a situation where

international price discrimination drives the domestic firms out of the market. In this study, we build on the "political economy perspective" to antidumping and seek evidence as to whether the political ideology of the government has an effect on AD usage and our empirical results suggest such an effect.

The theoretical perspective of our study is motivated by the earlier work of DM (2005). Simply put, Stolper-Samuelson theorem predicts that trade will increase the demand for the abundant factor in production and decrease for the scarce one. Therefore, in a capital intensive industry, it is the owners of labor who suffer, while capital owners gain from a shift towards protection. On the contrary, increased trade will benefit capital and hurt labor in labor intensive industries. DM (2005) argues that since importable good is the labor intensive one in a capital-rich country, an increase in the leftist orientation of the government increases the trade barriers in capital abundant countries, and an opposite scenario holds for the labor abundant countries. This hypothesis is strongly supported in DM (2005) with different types of protection tools such as tariffs, import duties and quotas.

Following the same line of argument with DM (2005), if the left-wing government is in power, we would expect an increase in the likelihood of a successful AD case from the labor intensive industries given the fact that such a government will be more willing to increase the return to labor. Moreover, we hypothesize that labor intensive industries believe that the leftist government favors them and thus they are more likely to file an AD petition in the periods of left-wing governments. These two hypotheses are strongly supported in our empirical analysis when we employ the

detailed AD data matched with the three-digit ISIC industries' trade and production data.

The rest of this paper is organized as follows. In section 2, we describe the econometric approach and the specifications carried out in our analysis. In Section 3, we briefly discuss the construction of the data. Section 4 presents the estimation results, and section 5 provides the concluding remarks.

#### 2. Econometric Methodology

#### Estimation of Antidumping Initiations

Antidumping is defined under the Article VI of the GATT. In order to receive protection in the form of an AD duty, domestic firms file an investigation and show evidence that exporting firms charge lower than the "fair price" they normally charge in their home market. In addition to this, they document that the domestic industry is "materially injured" by this price discrimination. Thereafter, national AD agencies evaluate the investigations and either they impose a duty to the particular product-country combination or they terminate the case without protection.

In order to examine the effect of partisanship on AD activity, we start with the following baseline model:

$$Y_{iht} = \phi_0 + \phi_1 Ideology_{it} + \phi_2 [Ideology_{it} * (K/L)_{iht}] + \phi_3 \left(\frac{K}{L}\right)_{iht} + \phi_4 Z_{ht} + \phi_5 T_{it} + \varepsilon_{iht}$$
(1)

where y denotes the total number of AD petitions filed by industry h in country i.  $(K/L)_{ih}$  is the capital-labor ratio of the three-digit ISIC industry,  $Ideology_{it}$  denotes

the degree of the government's leftist bias which is quantified as 1 for the right-wing ideology, 2 for the centrist ideology and 3 for the left-wing ideology.  $Z_{ht}$  and  $T_{it}$  are vectors of control variables.<sup>4</sup> A positive coefficient on the ideology variable and a negative coefficient in the interaction term would suggest that labor intensive industries believe that left-wing governments favor them and thus they are more likely to file an AD investigation given the higher expected belief they have for a successful outcome.

Since the dependent variable is count data with excess zeros, we employ Zero Inflated Poisson (ZIP) method suggested in Lambert (1992) and Greene (2004).<sup>5</sup> ZIP models the likelihood of an industry to file antidumping investigation in two stages. In the first one, domestics firms will never file an antidumping investigation. For instance, if an industry believes that the benefit of a successful case might not be sufficient enough to dominate the costs associated with filing an investigation because of their low share in total imports; it may never choose to claim dumping. In the second stage, the industry may or may not file an AD investigation based on the industry and country related factors.<sup>6,7</sup>

We also control for various other factors following the AD literature. For instance, in line with the WTO rules stated above, we include the average output and import growth of the industry in the last three years. The likelihood of filing an AD petition should increase with the fall in production and with more competition from

<sup>&</sup>lt;sup>4</sup> We use the natural logs of capital-labor ratios as in Dutt and Mitra (2005). Besides, this variable is lagged one period in all specifications of our empirical analysis to avoid the potential endogeneity.

<sup>&</sup>lt;sup>5</sup> The dependent variable is zero for the 80% of the total observations.

<sup>&</sup>lt;sup>6</sup> For the same argument and the application of ZIPM in antidumping literature, see Reynolds (2006).

<sup>&</sup>lt;sup>7</sup> To identify the first stage we used our industry and country controls.

imports. We believe that industries with higher output have more ability to file an AD petition due to the fact that it is easier for them to cover the fixed costs associated with filing and follow the necessary process of an AD investigation. Consequently, we control for the share of industry output in a country's total GDP to capture the lobbying and the financial power of that particular industry.

Following the argument in Francois and Niels (2006) and Knetter and Prusa (2003), we are more likely to find an AD petition in periods of exchange rate appreciation, current account deficits and economic recession. In this regard, we include the growth rate of GDP, exchange rate and current account balance. In addition, as noted in Bown (2008), 1995 inception of WTO resulted in a common set of rules which are binding for all members of WTO. Therefore, we included a dummy variable to control for the WTO membership. Finally, we also control for the democracy level in the countries given the fact that policy makers in democratic regime are more prone to pursue policies in favor of their electoral base.

#### Estimation of Antidumping Outcomes

We now turn our focus to the AD duty imposition decisions of AD authorities. As noted earlier, having reviewed the filings, AD authorities impose extra duties on the particular good in order to bring the value of the good closer to its fair value if there is dumping and injury to the domestic market.

In order to quantify the effect of government's ideology on the affirmative AD outcome, we carry out case-level estimation. We estimate the following linear probability model:

$$P(y_{ict} = 1) = \eta(\gamma_0 + \gamma_1 Ideology_{it} + \gamma_2 [Ideology_{it} * (K/L)_{iht}] + \gamma_3 (K/L)_{iht} + \gamma_4 Z_{iht} + \gamma_5 T_{it} + \varepsilon_{iht})$$

$$(2)$$

where the binary dependent variable is 1 if government authorities decide affirmatively to a specific AD case from industry *h* and zero otherwise. Our hypothesis is that left-wing governments, which tend to increase the returns to labor, are more likely to decide affirmatively for AD cases of the industries that are more labor intensive. Therefore, the predicted signs of the ideology variable and the interaction term are positive and negative respectively. We also include the same set of control variables in equation (1).

#### 3. Data

We collected the data of output, import, gross fixed capital formation, number of workers, number of establishments and the tariff data of 28 three-digit ISIC industries from *World Bank Trade, Production and Protection (TPP)* database (Nicita and Olerreaga, 2006. Following the convention, the capital stocks (*K*) of industries are calculated from investment series by the perpetual inventory equation:

$$K_{t+1} = I_t + (1 - \delta)K_t \tag{13}$$

where  $I_t$  is the gross fixed capital formation and  $\delta$  is the depreciation rate.<sup>8</sup> The initial capital stock  $(K_0)$  is computed as  $I_0/(\delta+g)$ , where g is the average geometric growth rate for the first ten years of available data.<sup>9</sup>

<sup>&</sup>lt;sup>8</sup> The depreciation rate is assumed to be 0.06.

<sup>&</sup>lt;sup>9</sup> See Caselli (2004).

The data on product-level AD investigations and outcomes are obtained from *Global Antidumping Database Version 5.0* (Bown, 2009) which provides detailed product-level information on AD filings and outcomes. This database provides the date of the initiation and final decision of AD case, the target country, the final decision of the AD authority as well as the HS codes of the products subject to filings. For the industry codes we used the concordances in the TPP database.

For the political ideology variable, we utilize the *Database of Political Institutions* (Beck et al., 2008), which is updated annually and includes data for the period 1975 through 2006. This database provides qualitative information on the political position of the executive power for each country, in the form of leftist, centrist and rightist ideologies. Our continuous ideology variable, whose increase can be interpreted as an increase in the leftist orientation, takes on a value of 1, 2 and 3 for the right-wing, centrist and left-wing governments respectively.<sup>10</sup>

For the democracy index, we use *Freedom in the World Country Ratings*, Freedom House's publication which was published in 1972 and reports the data on civil liberties and political rights for 193 countries. The democracy (political rights) index is such that more democratic countries are assigned a lower score than less democratic countries on a scale of 1 to 7. We reversed the scores by subtracting each score from 8 so that more democratic countries take higher scores.

The data on WTO membership comes from WTO website and the data on tariff of six-digit Harmonized System products are obtained from UNCTAD's TRAINS

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<sup>&</sup>lt;sup>10</sup> While we do not report in the paper, we also tried assigning a dummy variable for each ideology category and running the regressions with that measure in order to test for the robustness of the results. Our findings are insensitive to different treatment of the ideology measure.

database. Finally, we use the database of *United States Department of Agriculture* (USDA) Economic Research Service for the data of exchange rate and World Development Indicators for the data of GDP growth and the current account.

Table 1 and Table 2 provide the descriptive statistics and Table A1 documents the countries in the sample and their overall AD activity. 11,12

#### 4. Results

Table 3 reports the estimates of the zero inflated Poisson model in equation (1). As documented, the positive coefficient of the ideology variable and the negative coefficient of the interaction term support the prediction that the number of AD investigations increases for labor intensive industries when the government's leftist orientation increases. The rationale behind this finding is that such industries believe that left-wing governments favor them and thus their expected probability of winning a case is higher in the periods with leftist governments.

In terms of control variables, we observe more AD filings from the industries with higher output share in accordance with the lobbying and financial power argument. In addition, with respect to the WTO requirements, an increase in industry output is associated with a decrease in the number of AD initiations, and the opposite result is observed with an increase in growth of the industry imports. Moreover, consistent with the previous studies in AD literature, appreciation of the local

<sup>&</sup>lt;sup>11</sup> The availability of the investment and labor data in TPP determines the sample of our analysis

<sup>&</sup>lt;sup>12</sup> The reason why we do not include the European Union (EU) countries is that AD decisions in the European Union are evaluated by the Trade Directorate of the European Commission which makes it ambiguous to analyze which country's ideology matters. In addition, as provided by Global AD database (Bown, 2009), firms from different countries jointly file in most of the AD cases of the EU. Furthermore, Indonesia is excluded from our sample because the ideologies of the political parties of Indonesia are unspecified in the DPI database.

currency and the periods of economic recession are associated with an increase in the number of AD filings.

Moreover, increase in the democratization of the country is also associated with higher number of AD petitions. This can be attributed to the higher expected probability of wining an AD case because of better institutions in a democratic regime. This result might also implicate that industries in democratic countries have easier access to the government agencies which reduces their filing costs associated with an AD petition. The positive sign of the coefficient on the WTO membership shows the triggering effect of common set of AD rules on the industries' AD initiations after the 1995 inception of WTO.

We now turn to the results of government's decision to impose AD duty. In Table 4, we report the case level AD decision estimates when each observation is matched with its three-digit ISIC code. In line with the partisan trade policy, the positive estimate of the ideology variable and the negative estimate of interaction term demonstrate that an increase in the leftist bias of the government is associated with an increase in the likelihood of an affirmative outcome for the industries operating at low capital-labor ratio. This is also depicted in Figure 1 which shows the relationship between the leftist orientation of the government and the probability of a successful AD filing for different levels of the capital intensity of the industries. As shown, we have a negatively sloped line and the negative marginal effect is obtained for the capital-labor ratios above the critical one.  $(\gamma_1/\gamma_2)$ 

In terms of control variables, we find that petitions from larger industries which are more likely to be organized for lobbying are associated with a higher probability of a successful outcome. Consistent with the WTO's requirements, industries facing more competition from imports are more likely to grant AD protection, as well as the industries experiencing a depression in production. Finally, we do not find a significant effect of the macroeconomic determinants on the probability of observing a successful AD case.

#### 5. Conclusion

After the dramatic tariff-cuts global trade experienced in the last two decades, countries still can find alternative ways for temporary protection. Out of these nonmethods, AD has become the most frequently used non-tariff barrier. Although an ideal AD case aims to hinder unfair competition in the international market, it has been widely argued that AD is also motivated by political economic considerations. To our knowledge, this study is the first attempt to examine one dimension of these political economic factors, the effect of political ideology of the governments on AD activity. Matching the data on three-digit ISIC industries' production and investment with the detailed product level information on AD filings, we demonstrate that in the periods of left wing governments, an increase in the labor intensity of the industry is associated with an increase in the number of AD filings from that industry. In addition, our results confirm the effect of political ideology on the governments' decision to impose AD duty. The empirical results suggest that the probability of a successful AD investigation increases in labor intensity of that industry when there is a left-wing government in power. Our results are also robust to controlling for country and industry fixed effects and also insensitive to controlling for several factors which is pointed out in the existing literature.

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**Table. 1. Summary Statistics (Industry Estimation)** 

Variable	Mean	Max	Min	Standard deviation
AD Initiation	0.096	1	0	0.295
Ideology	1.936	3	1	0.927
K/L (log)	10.161	16.629	4.702	1.257
Output share	0.936	13.228	0.001	1.331
Output growth§	0.091	4.820	0.613	0.186
Import growth§	0.508	180.498	0.986	5.562
GDP growth	4.090	12.822	-11.7	3.941
Exchange rate	0.950	69.458	0.151	6.460
Current account*	24.656	40.371	-413.442	65.385
WTO membership	0.384	1	0	0.486
Democracy	5.576	7	2	1.292

<sup>-</sup>  $^*$  variable scaled down by  $10^6$  -  $^\$$  Average percentage change from three years before t.

**Table 2. Descriptive Statistics ( Case level)** 

Variable	Mean	Max	Min	Standard deviation
AD affirmative	0.596	1	0	0.490
Ideology	1.711	3	1	0.946
K/L (log)	11.102	13.157	8.276	0.932
Output share	1.598	12.357	0.022	1.590
Output growth <sup>§</sup>	0.047	1.908	-0.561	0.179
Import growth§	0.080	4.033	-0.507	0.270
GDP growth	3.307	9.486	-6.854	2.989
Exchange rate	0.092	1.638	- 0.157	6.460
Current account*	-60.680	40.371	-413.442	102.243
WTO membership	0.427	1	0	0.494
Democracy	6.190	7	3	1.240

<sup>-</sup>  $^*$  variable scaled down by  $10^6$  -  $^\$$  Average percentage change from three years before t.

### TABLE 3. ZERO INFLATED POISSON MODEL ESTIMATES OF ANTIDUMPING FILINGS

Dependent variable: Number of AD filings by industry h in country i

	Coefficient
	Estimates
The role of ideology	
<i>Ideology</i> <sub>it</sub>	2.276
	(2.31)**
Ideology <sub>it</sub> * (K/L) <sub>iht</sub>	~0.201
	(6.36)***
$(K/L)_{iht}$	0.030
	(3.67)***
Other Political determinants	
Output share of the industry	0.012
T	(5.61)***
Import growth of the industry	0.034
r · · · · · · · · · · · · · · · · · · ·	(5.76)***
Output growth of the industry	~0.094
- mp m 8-2 m = 2- m =	(1.92)*
WTO membership	0.094
, i c construction of	(5.12)***
Democracy	0.075
	(2.13)**
Macroeconomic factors	(=1==7
GDP growth	~0.044
	(3.60)***
Exchange rate	-0.191
21.01.01.06	(5.49)***
Current Account	~0.000
	(0.67)
	(0.0.7
Country fixed effects	Yes
Industry fixed effects	Yes
Observations	3234

Notes: All specifications include a constant which is suppressed. Robust t statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

TABLE 4. LINEAR PROBABILITY MODEL ESTIMATES OF ANTIDUMPING DUTY IMPOSITION DECISION

The role of ideology	Coefficient Estimates
Ideology <sub>it</sub>	0.644
	(3.86)***
Ideology <sub>it</sub> * (K/L) <sub>iht</sub>	~0.059
	(2.12)**
$(K/L)_{iht}$	0.203
	(1.97)*
Political determinants	
Output share	0.026
•	(2.12)**
Import growth	0.230
	(3.98)***
Output growth	~0.262
	(4.80)***
WTO membership	-0.076
	(0.65)
Democracy	0.034
	(0.65)
Macroeconomic factors	
GDP growth	~0.002
S	(1.32)
Exchange rate	0.015
	(1.89)
Current Account	0.000
	(0.23)
Country fixed effects	Yes
Industry fixed effects	Yes
Case fixed effects	Yes
Observations	1195

Notes: All specifications include a constant which is suppressed. Robust t statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

4 ته ا Kernel Densit/ Estimate of Inkap 4  $\vec{c}$ ω. ď 0 -.2 Mean of log(capital-labor ratio) 10 11 log(capital-labor ratio) 12 8 9 13 Thick dashed lines give 95% confidence interval. Thin dashed line is a kernel density estimate of Inkap.

Figure 1. The effect of Ideology on Affirmative AD case

Note: The increase in ideology can be interpreted as an increase in the leftist bias of the government.

TABLE A1. ANTIDUMPING USE OF THE COUNTRIES IN THE DATA SAMPLE

Country	Time period	Number of AD investigations	Number of affirmative cases	Share of affirmative cases in total investigations	Year of implementation of AD law
Australia	1986~2001	412	131	0.31	1906
Canada	1986~1990	85	65	0.76	1904
Colombia	1990~2000	33	18	0.54	1990
India	1986~2001	261	210	0.85	1985
Korea	1986~2001	61	38	0.62	1963
Mexico	1986~2000	184	95	0.51	1986
Peru	1991~1996	49	16	0.32	1991
Turkey	1989~2000	72	50	0.69	1989
United States	1986~2001	573	277	0.48	1916
Subtotal		1715	900	0.52	

Source: Global Antidumping Database, Bown (2009) and Zanardi (2004).

Note: The availability of investment data determines the sample size. For Colombia, Peru and Turkey the starting years are the year of implementation of AD law.