Online Appendix for:

Asset specificity, corporate protection, and trade policy

Contents

A Further Description of Antidumping Procedures

A.1 How Antidumping Cases are Decided

Antidumping tariffs are imposed by national governments and trade jurisdictions as temporary tariffs on import-competing products and companies from foreign countries. Ideally, they are construed as a means of protecting companies against predatory pricing by foreign competitors. However, although the outcome of an antidumping investigation is decided bureaucratically, the regulators are not insulated from these political pressures. For firms, pressuring the bureaucracy (Gordon and Hafer 2005), or even enlisting sympathetic politicians to do so on their behalf (Hall and Miler 2008) is an effective means of gaining leeway over the bureaucracy. This also holds for the bureaucratic agencies that decide on antidumping investigations. Indeed, Blonigen and Prusa (2003, p. 253) argue that antidumping "no longer has anything to do with predatory pricing ... it is simply another tool to improve the competitive position" of the domestic industry. Antidumping measures help domestic companies increase their market power to such a degree that they are among the costliest trade protection measures in the US (Blonigen and Prusa 2003, p. 271) and have been linked to large suppressions of international trade in general (Bown and Crowley 2007).

Antidumping investigations are initiated when a domestic firm files a complaint against a foreign competitor. At their own discretion, domestic authorities can impose duties with an extremely high level of granularity, singling out the company mentioned in the complaint, but also specific products it exports. Under the WTO Agreement, a company is said to be dumping a product when it sells it at a lower price in the importing country than on the company's home market in the ordinary course of trade (WTO 2018). When no such data is available, domestic authorities make their antidumping rulings based on constructed normal prices (WTO 2018). Imposition of antidumping measures are allowed insofar as it has been established that an exporting company is dumping the price of its product, and that this is causing injury to companies on the importing market. They are repealed after a period of five years (WTO 2018).

A.2 Institutional Variations Between Countries

While decisions regarding antidumping duties are decided administratively in all settings, countries can design their antidumping statutes as they see fit (WTO 2018). This results in large cross-country differences in how antidumping investigations are conducted and decided upon. For instance, the WTO agreement specifies that imposition of antidumping duties require evidence for dumping, injury to a domestic firm, and a causal link between

the two. However, the investigative process is implemented differently across jurisdictions – some locating all decisions with a single agency, while others divide them between agencies.

In the European Union (EU), for instance, complaints from firms are first examined by an advisory committee consisting of a representative from each member state and the Commission. If this initial investigation confirms that dumping has occurred, the Commission conducts its own investigation into both dumping and injury. It then issues its preliminary ruling, possibly imposing initial ad valorem duties, after which the Council of Ministers makes the final decision (Bjørnskov et al. 2009). The US, on the other hand, has bifurcated the antidumping decision process. The determination of dumping is carried out by the Department of Commerce, while the International Trade Commission determines injury (Blonigen and Prusa 2003). Additionally, there are large differences between the two jurisdictions in how shielded the decision is from political pressure. While the decision in the EU directly involves political actors, and is highly intransparent, US regulators are formally independent from both executive and legislative pressures. However, since both those branches of government hold great sway over budgetary decisions, antidumping measures are no less politicized in the US than in the EU (Blonigen and Prusa 2003). These large differences in the institutions governing the antidumping process constitute one reason why the extent of its use varies widely between jurisdictions (Blonigen and Prusa 2003).

B Further Details on the Dataset

In this section of the appendix, we describe in further detail our two main data sources and how they were matched. We also details on the patterns of missingness, variable definitions and descriptive statistics.

B.1 Data Sources

The Global Antidumping Database

The (Bown 2016) database sources national documentation on the use of antidumping instruments, including targeted products (HS codes), the names of petitioning and punished firms, the investigative procedure and outcomes (decisions and the size of the punitive tariffs) in 24 countries and the European Union (EU). In the case of the EU, it dates back to the 1970s, but mostly it extends only to the 1990s or 1980s. Due limitations of the Orbis financial data, we only include 19 trade jurisdictions after 2006. The database is expected to have good coverage, and include approximately 95% of all antidumping cases in these countries.

As explained in the main text, as all companies included in the sample petition for antidumping protection, this allows us to measure whether they are successful in their lobbying endeavor and to which extent. Importantly, we can use the product information to estimate diffusion and take product-level, time-invariant confounders into account into account. The database also allows us to include fixed effects for country and year.

The Orbis Database

We manually match the names of petitioning firms from the Bown database to the commercial Orbis database of company finances.

Bureau van Dijk – the operators of Orbis – contract with local actors to get standardized company-level accounting information, normally from the firm's own annual reports.

Our main variable – asset specificity – is the ratio of fixed to total assets. Fixed assets are investments in plant, property and equipment, which cannot be liquidated within a year.

As reporting requirements vary vastly between countries, and firms may not comply with them, we are unable to get full coverage of the financial characteristics of petitioning firms in the Bown database. We are able to get data on approximately half of all companies (about 2,370) on asset specificity (our main variable), and about 20% (1,030 observations) for our full number of covariates. To make sure results are comparable between models (i.e. are not driven by the inclusion of different subsets of observations), in our main results we rely on the observations, where we have full coverage. However, our results are

robust to this choice.

B.2 Missing Data

While the Orbis database does provide the best possible financial data, we still are unable to get financial data on a number of petitioning firms. To alleviate concerns that systematic patterns of missingness may be driving our results, we first construct an indicator for whether an observation is missing for each of the variables included in our main models. We then regress this indicator on the variables in the model. Results are presented in Table B.1. In some instances, we had to drop a covariate, because no coefficients could be estimated.

Missingness for each of our covariates is largely orthogonal to other factors in our models. This reassures us of two things: first, that missingness is not driving our main results. Second, that only including the same observations in all models – to ensure comparability – does not drive our results.

Table B.1: Missingness Does Not Correlate with Observables

	Dependent variable:			
	Missing Specificity	Missing Taxes	Missing Revenue	Missing Assets
	(1)	(2)	(3)	(4)
Revenue	0.000	0.000		−0.000
	(0.000)	(0.000)		(0.000)
Total Assets	−0.000	−0.000	−0.000	
	(0.000)	(0.000)	(0.000)	
Taxation	0.000		0.000	−0.000
	(0.000)		(0.000)	(0.000)
Asset Specificity		0.020	0.007	
		(0.025)	(0.009)	
Constant	0.001	0.045***	0.003	0.008***
	(0.001)	(0.014)	(0.005)	(0.002)
Observations	2,229	2,352	2,242	2,246
R^2	0.0001	0.003	0.001	0.0003
Note:				*p<0.1; **p<0.05; ***p<0.01

B.3 Variable definitions

Table B.2: Definitions of variables included in the models

Variables	Description	Data source
Dependent variables		
Dumping Decision	Binary: equals 1 if a firm's petition to have AD duties placed on foreign competition is successful.	Bown (2016)
Size of AD Duty	Percent of sales price added as AD duty (logged)	Bown (2016)
Primary Explanation		
Asset Specificity	A firm's fixed assets as a proportion of total assets.	Orbis (2016)
Firm-level Controls		
Total Assets	A firm's total asset holdings (USD, logged).	Orbis (2016)
Revenue	A firm's revenue (pre-tax, USD, logged).	Orbis (2016)
Taxation	A firm's total tax payments (USD, logged).	Orbis (2016)
Capital	A firm's total capital holdings (USD, logged).	Orbis (2016)
Fixed Effects		
Country	Full set of dummies capturing the home-country of the complaining firm.	Orbis (2016)
Year	Full set of dummies capturing the year of an AD decision.	Bown (2016)
Product	Full set of dummies indicating which product (HS10 code) the firm seeks protection for.	Bown (2016)
Spatial variables		
Spatial weights matrix	A binary, NxN connectivity matrix, where all companies from the same country, that seek protection for the same good within the same year, but against different competitors, are connected.	
Spatial lags of DV	DVs multiplied by the weights matrix. Used for capturing diffusion of protection among neighboring companies.	
Spatial lags of Xs	Covariates multiplied by the weights matrix. Used for capturing effect of company i's resources on j's protection (e.g. counter lobbying etc.).	

B.4 Descriptive statistics

Table B.3: Descriptive Statistics

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Dumping Decision	1,030	0.839	0.368	0	1	1	1
Duty Size	1,030	43.860	67.459	0	10.1	45.2	380
Asset Specificity	1,030	0.561	0.187	0.001	0.458	0.693	0.941
Total Assets	1,030	3,154,105.000	10,749,869.000	1.320	78,599.880	784,971.800	91,389,640.000
Revenue	1,030	2,159,927.000	7,225,859.000	0.900	75,597.420	769,345.900	46,991,646.000
Taxation	1,030	40,358.080	163,505.300	−119,067.300	77.510	17,858.000	1,245,837.000
Capital	1,030	253,557.100	876,432.200	0.000	4,599.150	28,031.030	5,931,748.000
SL Specificity	1,030	10.344	12.558	0	0	17.9	38
SL Revenue	1,030	53,145,261.000	155,355,969.000	0	0	14,431,371.0	582,508,524
SL Total Assets	1,030	66,112,739.000	189,296,679.000	0	0	14,568,003.0	704,291,378
SL Tax	1,030	1,052,244.000	3,087,621.000	−5,970	0	303,881.9	11,598,693
SL Capital	1,030	1,331,586.000	3,821,088.000	0	0	503,999.2	25,881,016

Note: 'SL' is an abbrevation of 'spatial lag'. To show the raw distributions, all variables are presented in their untransformed form.

B.5 Pairwise correlations

Table B.4: Correlations among covariates

	Asset Specificity	Revenue	Total Assets	Taxation	Capital	SL Specificity	SL Revenue	SL Assets	SL Tax	SL C
Asset Specificity	1									
Revenue	0.341	1								
Total Assets	0.423	0.974	1							
Taxation	0.071	0.209	0.223	1						
Capital	0.312	0.678	0.718	0.083	1					
SL Specificity	0.243	0.126	0.112	0.080	-0.024	1				
SL Revenue	0.070	0.042	-0.001	-0.008	-0.044	0.620	1			
SL Assets	0.080	0.058	0.018	-0.005	-0.025	0.618	0.998	1		
SL Tax	0.073	0.025	-0.019	-0.018	-0.059	0.629	0.996	0.990	1	
SL Capital	0.156	0.200	0.204	0.067	0.135	0.364	0.628	0.666	0.571	

C The Process of Tie Formation and Spatial Autocorrelation

Besides asset specificity, our main focus is on how protection afforded to immobile firms diffuses to firms that seek protection for the same good. Because of this, it is worthwhile to discuss further a) how often firms seek protection for the same good, b) when the competition decides to seek protection for the same good, and c) more closely examining how protection afforded to one firm reacts to protection afforded to others.

C.1 How Often Do Same-Good Producers Seek Protection As Well?

In this section, we describe the spatial weights matrix and investigate which companies are most likely to compete for antidumping duties – i.e. the correlates of tie formation.

Figure C.1 shows the distribution of ties in the network of protection-seeking firms. As could be guessed from viewing the descriptive statistics in Table B.3, the distribution is skewed. That is, a little less than half of the firms included do not have domestic competitors seeking protection for the same good. Most firms, however, have many domestic competitors seeking protection as well – and once you have some, you are likely to have many.

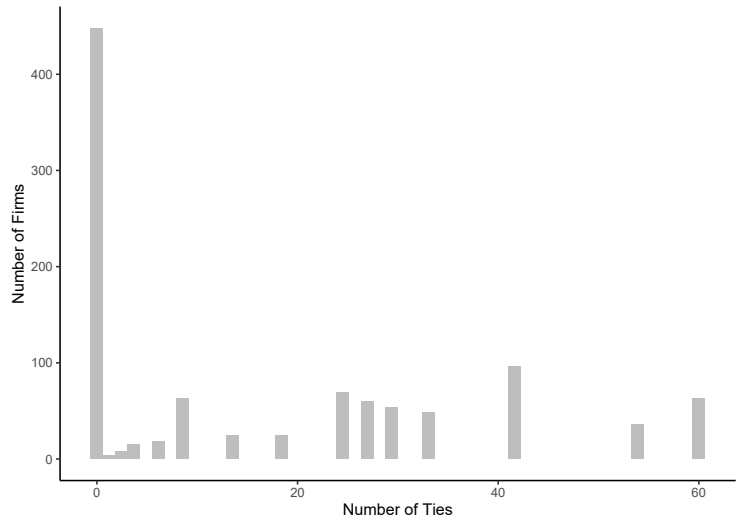


Figure C.1: The Distribution of Same-Good Producers Seeking Protection. *Note: A histogram of the distribution of ties in the network of same-good producers seeking protection for the same good, i.e. our spatial weights matrix.*

C.2 When Do Same-Good Seek Protection As Well?

In Figure C.2, we investigate the firm-level correlates of having domestic competition seeking protection for the same company. As we can see from Panel A, *between* groups of same-good producers, firms with specific assets tend to have many competitors seeking protection at the same time as them. However, when product fixed effects are included, this correlation disappears. This suggests that competition for protection is primarily localized among products, where all firms have high levels of asset specificity.

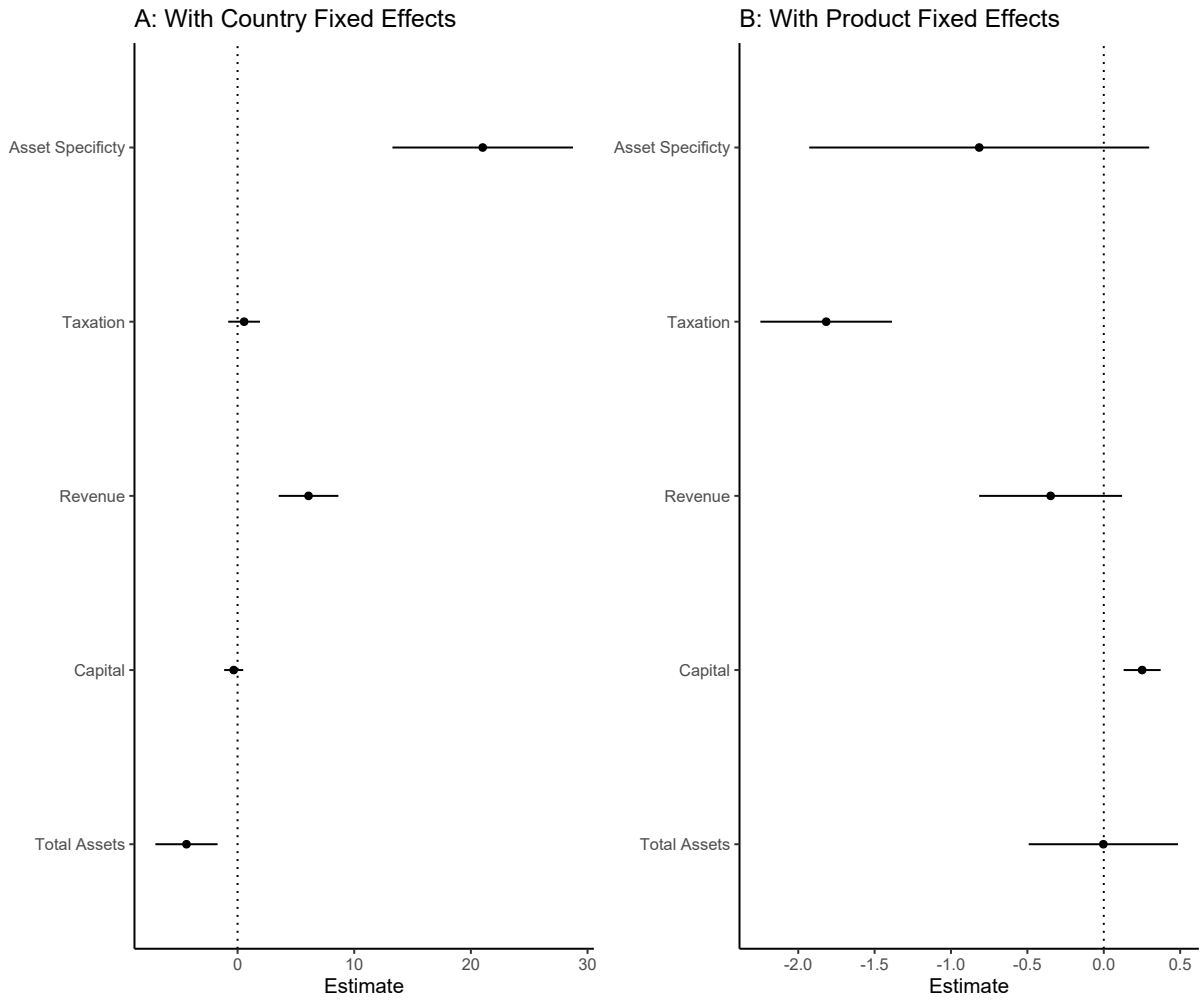


Figure C.2: The Correlates of Seeking Protection Simultaneously. *Note: The figure presents the coefficients from an OLS regresison of tie counts on firm financial characteristics. All predictors are logged to facilitate comparisons. Panel A includes country fixed effects, while Panel B also has product fixed effects. Lines are 95 percent confidence intervals.*

Investigating how tie formation is associated with the financial characteristics of the firm's competitor – by regressing tie formation on the spatial lags of the predictors – provides some interesting results. As we can see, the firms, whose *competitors* have

highly specific assets, are much more likely to have many ties – even if we only look at within-product variation. This indicates that when a firm with highly specific assets seeks protection, same-good producers also petition for antidumping duties. That is, how many other firms a company competes against to gain protection does not react to the firm's own level of asset specificity – but the asset specificity of its competitors. This suggests that a firm chooses to seek protection, when it has immobile competition that does so – as a reaction to its immobile competition. This provides an interesting nuance to how the competition for protection arises.

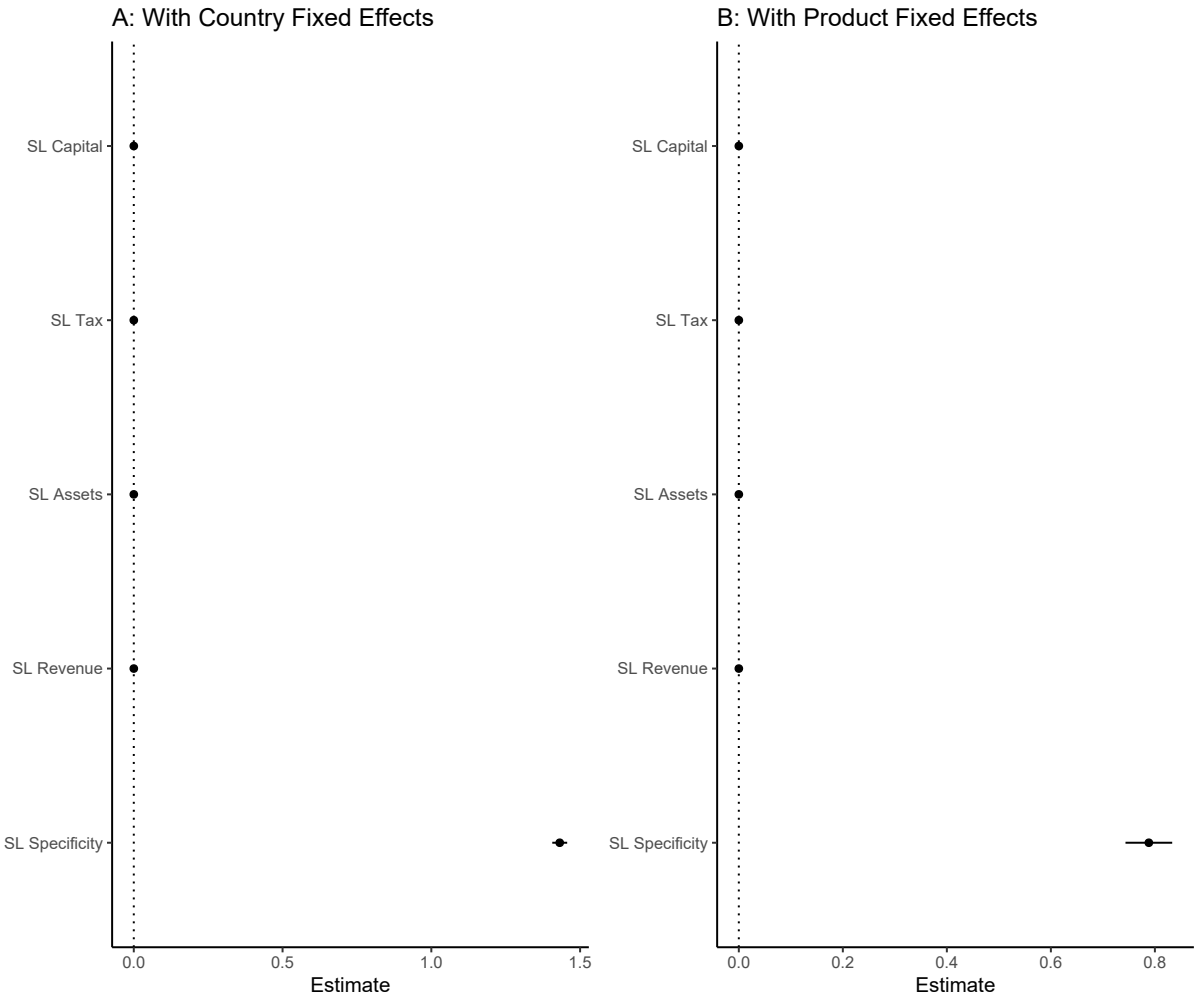


Figure C.3: The Correlates of Seeking Protection Simultaneously. *Note: The figure presents the coefficients from an OLS regresison of tie counts on the financial characteristics of a firm's competitors – i.e. other firms producing the same good. Panel A includes country fixed effects, while Panel B also has product fixed effects. Lines are 95 percent confidence intervals.*

C.3 How Does Protection of One Firm React to Protection of Others?

While looking at the estimated parameter gives an indication of how strong spatial autocorrelation is, it is worthwhile taking a closer look. Here, we present diagnostics on the spatial dynamics of antidumping duties that also allow us to look at the individual firm.

Figure C.4 shows two Moran scatterplots, where the spatial lags of the dependent variables are on the vertical axis, while their non-lagged version are on the horisontal. The contemporaneous autocorrelation is clearly present for both dumping decision and dumping duty – if same-good producers gain protection, you are likely to do so as well, and as their duty size increases, so does yours. Furthermore, this is not driven by the presence of single outlying observations, but is a general trend across the sample.

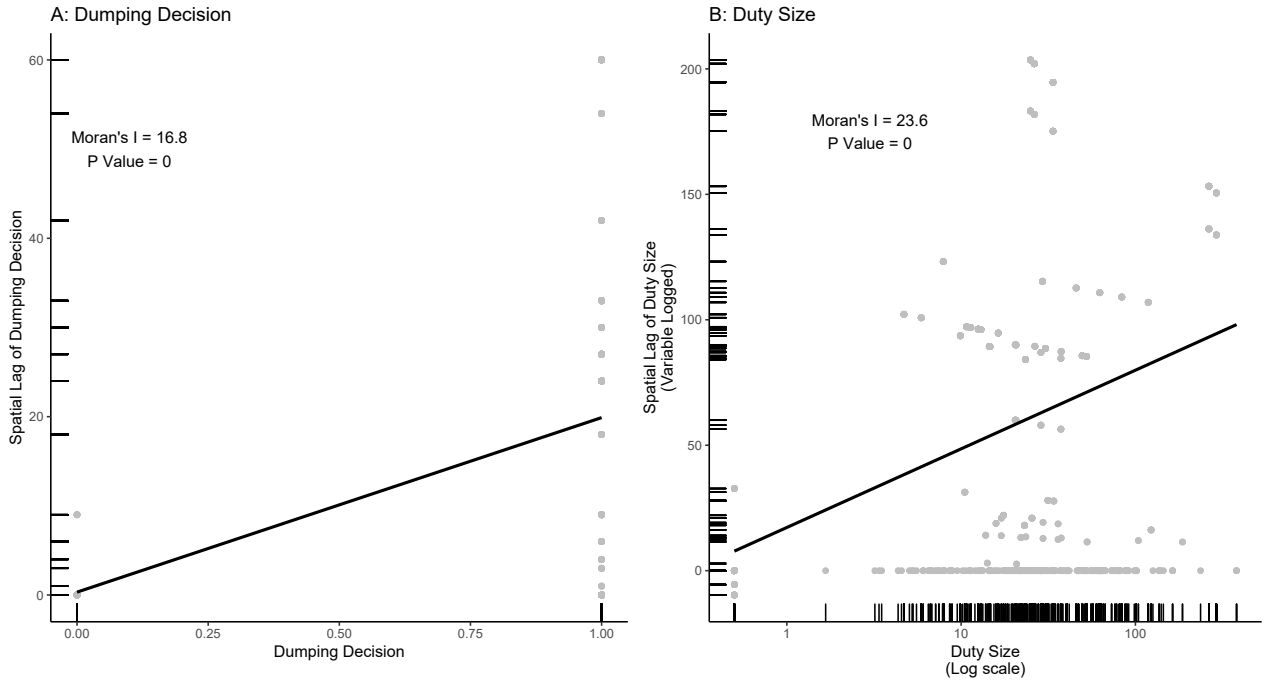


Figure C.4: Diagnosing Spillover of Antidumping Duties. *Note: The figures show Moran Scatterplots of the spatially lagged dependent variables (Dumping Decision in Panel A, Dumping Duty in Panel B) against their non-lagged counterparts. The slope of the fitted line is equal to the global Moran's I (printed in the top left corners), and each points position gives their local Moran's I.*

D Details of the SAR Model Specification

We consider variations of the following linear SAR model with spatial lags of the covariates:

$$y_{fct} = \rho(\omega y_{fct}) + \gamma M_{fct} + \beta_1 X_{fct} + \beta_2(\omega X_{fct}) + \lambda_{fc} + \phi_t + \alpha_{fct} + \epsilon_{fct} \quad (1)$$

Where y_{fct} represents the regulator's response to company f's complaint, c, at time t. This can either be a binary decision of whether dumping has occurred or not, or the (logged) duty levied on the foreign competitor's product. M represents the asset mobility of the firm. γ measures the association between antidumping protection and asset specificity.

ωy_{fct} is the spatially lagged dependent variable, which allows us to estimate inter-firm dynamics. ρ is the estimate of the spillover effect from company f's success in its antidumping complaint to its neighboring firm's chance of gaining protection as well. Due to a very high number of parameters relative the number of observations, we estimate the model using a linear link function. Using the spatial probit estimator in this case would either cause severe bias due to incidental parameters, or cause the estimation not to converge at all.

We also include ωX which is a full set of spatial lags of the covariates. Besides allowing us to estimate spatial dynamics, this model is also appealing from a causal inference point of view. Less mobile companies are likely to be clustered together in industries where trade protection in the aggregate evolves together according to a common trend. Estimating a spatially autoregressive model with distributed spatial lags of the covariates accommodates this potential confounder by allowing firms that produce the same product to follow such similar trends in antidumping protection, and by allowing firm characteristics to affect the outcomes of other companies.

λ is a set of country fixed effects, capturing the home country of the complainant. This removes the influence of all time-invariant confounders at the country-level. ϕ is a set of year fixed effects, controlling away the effect of common shocks with homogeneous effects. α, the full set of fixed effects for the products. While industry fixed effects could deal with the fact that industries vary in their baseline levels of protection, they would leave out the important complication that there are large intra-industry differences. Since no product changes industry in our sample, including product fixed effects also controls away industry-invariant factors. Finally, ϵ constitutes a random error term.

Table D.1 is a regression table with the coefficients. These are converted to marginal effects and presented as a figure in the main text.

Table D.1: SAR Coefficients

	Dependent variable:					
	Dumping Decision			ln Duty Size		
	(1)	(2)	(3)	(4)	(5)	(6)
Asset Specificity	0.139**	0.285***	0.119***	−0.188	0.922***	0.400*
	(0.059)	(0.065)	(0.045)	(0.269)	(0.294)	(0.220)
Revenue (log)		0.108***	0.003		0.573***	−0.009
		(0.022)	(0.018)		(0.097)	(0.093)
Total Assets (log)		−0.094***	−0.014		−0.526***	−0.045
		(0.023)	(0.019)		(0.102)	(0.099)
Taxes (log)		−0.034***	0.091*		−0.078	0.322
		(0.011)	(0.052)		(0.050)	(0.267)
Capital (log)		−0.024***	0.002		−0.076**	0.013
		(0.007)	(0.004)		(0.031)	(0.023)
Constant	0.937***	1.299***	0.302	4.324***	5.549***	0.378
	(0.151)	(0.201)	(0.583)	(0.691)	(0.876)	(3.044)
ρ	0.016***	0.015***	-0.019***	0.017***	0.016***	-0.023***
	(5e-04)	(0.0012)	(0.0023)	(1e-04)	(9e-04)	(4e-04)
Country FE?	Yes	Yes	Yes	Yes	Yes	Yes
Year FE?	No	Yes	Yes	No	Yes	Yes
Product FE?	No	No	Yes	No	No	Yes
Observations	1,030	1,030	1,030	1,030	1,030	1,030

*Note: Dependent variable in columns (1)-(3) is Dumping Decision. Dependent variable in columns (4)-(6) is Duty Size (logged). Coefficients are from linear SAR models. Standard errors in parentheses. *, ** and *** indicate statistical significance at the 10, 5 and 1 pct. levels, respectively.*

D.1 Results without spatial lags

Table D.2: Capital Immobility and antidumping protection at the firm-level

	Dependent variable:					
	Dumped or not			Duty (logged)		
	(1)	(2)	(3)	(4)	(5)	(6)
Mobility	0.162**	0.425***	0.432***	−0.755**	0.878**	0.867**
	(0.020, 0.303)	(0.265, 0.585)	(0.267, 0.597)	(−1.488, −0.023)	(0.109, 1.648)	(0.088, 1.646)
Revenue (logged)		0.177***	0.168***		1.081***	1.052***
		(0.120, 0.234)	(0.112, 0.225)		(0.824, 1.338)	(0.794, 1.310)
Total Assets (logged)		−0.183***	−0.156***		−1.121***	−1.049***
		(−0.242, −0.124)	(−0.214, −0.097)		(−1.380, −0.863)	(−1.315, −0.783)
Taxation in USD			−0.028***			−0.115***
			(−0.047, −0.010)			(−0.188, −0.043)
Total Capital in USD			−0.022**			−0.047
			(−0.040, −0.004)			(−0.119, 0.025)
Country FE?	Yes	Yes	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,030	1,030	1,030	1,030	1,030	1,030
Adjusted R^2	0.328	0.369	0.377	0.239	0.308	0.311

*Note: Dependent variable in columns (1)-(3) is Dumping Decision. Dependent variable in columns (4)-(6) is Duty Size (logged). Coefficients are unstandardized LPM and OLS estimates, respectively. Robust 95 pct. confidence intervals in parentheses. ** and *** indicate statistical significance at the 5 and 1 pct. levels, respectively.*

E Robustness Checks

E.1 Do Firms Increase Specificity When they Expect Protection?

There is an important strategic dimension to the interactions between decision-makers and firms: If the company knows that it will gain protection, if it invests more in specific assets, it is more likely to make those investments. It is important to note, however, that if firms invest in fixed assets is a best response in expectation of protection, then asset specificity has to affect antidumping decisions. Therefore, while the reverse causality induced by strategic investments will bias our results upward, the true effect of asset specificity can never be zero.

While this suggests that the true impact of asset specificity should be bounded between zero and our baseline estimate, it is still important to deal with the bias to get a better idea of the relationship between asset specificity and protection. To device a strategy for doing so, we consider how information about the likelihood of protectio might be dispersed. How will firms know that they are likely to gain protection, if they petition for it? We use the outcomes of antidumping cases regarding the project the firm wants protected in the previous years. If a given product has received a high level of protection, this will be a good indicator to the firm that they are likely to receive protection as well.

Table E.1 presents the results of a number of robustness checks building on this idea. Column 1 and 2 regresses asset specificity on the previous year's probability that the product mentioned in the firm's petition is protected. As we can see from column 1, an increase of one percentage point in the probability of being protected is associated with an increase of 0.5% of a standard deviation in future fixed asset investments. Including country and year fixed effects in the next column reduced the estimate slightly. While this estimate is very precisely estimated, it is also *very* small. This makes sense – it seems unlikely that a company will base the majority of its investment decisions on the protection awarded to a single product. The small size of the effect suggests that while strategic investments *do* happen, they are unlikely to be the main driver of our findings.

In columns three and four, we include prior protection for the product as a control in our baseline models with controls and country as well as year fixed effects. The table presents the coefficients from the SAR models – for reference, the baseline coefficients are 0.34 and 0.85, respectively. Hence, as we can see, the results maintain. However, the estimates are smaller, consistent with some degree of strategic investment happening.

Table E.1: Strategic Investment Under Expectation of Protection

	Dependent variable:			
	Asset Specificity		Dumping Decision	Duty Size
	OLS		*SAR*	
	(1)	(2)	(3)	(4)
Asset Specificity			0.275***	0.650**
			(0.061)	(0.286)
Previous Level of Protection	0.005***	0.003***	0.002***	0.008***
	(0.001)	(0.001)	(0.0002)	(0.001)
Country FE?	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes
Firm Covariates?	No	No	Yes	Yes
Observations	1,030	1,030	1,030	1,030

*Note: Dependent variable in columns (1)-(2) is Asset Specificity (mean-centered and rescaled by standard deviation). Dependent variable in columns (3)-(4) is Dumping Decision and Duty Size (logged). Coefficients are unstandardized OLS and SAR, respectively. ** and *** indicate statistical significance at the 5 and 1 pct. levels, respectively.*

E.2 The Role of Foreign Firms and Countries

Some firms and countries might engage in predatory pricing more often – this will mean that the antidumping cases are legitimate, and not to shield the domestic company against fair competition. Additionally, there are a number of factors in the relationships between countries that might shape decisions regarding protection.

Particularly the legitimacy of an antidumping case is difficult to capture. In this appendix, we deal with these threats to identification in two ways. First, we include fixed effects for the country of origin of the foreign firm. In addition to our baseline controls, this is a powerful set of fixed effects. Along with the country and year fixed effects, this means that we control away all time-invariant factors in the relations between countries and that respond similarly to common shocks. Additionally, this deals with the propensity of some countries to engage more in predatory pricing. These results are presented in columns 1 and 2 of Table E.2.

Some foreign firms might use predatory pricing strategically to get a foothold on a foreign market. This might be a particularly effective strategy, if the competitors on the market the firm wants to enter has very specific assets. However, we can measure if firms engage in broad strategies of predatory pricing – if they do, they are likely to be mentioned in many strategies over time. To capture this, we collect data on the foreign firms that are mentioned in antidumping petitions, and compute how often they each are mentioned. For each of our antidumping cases, we then compute the average number of times each foreign firm is mentioned in another complaint throughout our period of investigation. In columns three and four, we include this as a control – the results maintain.

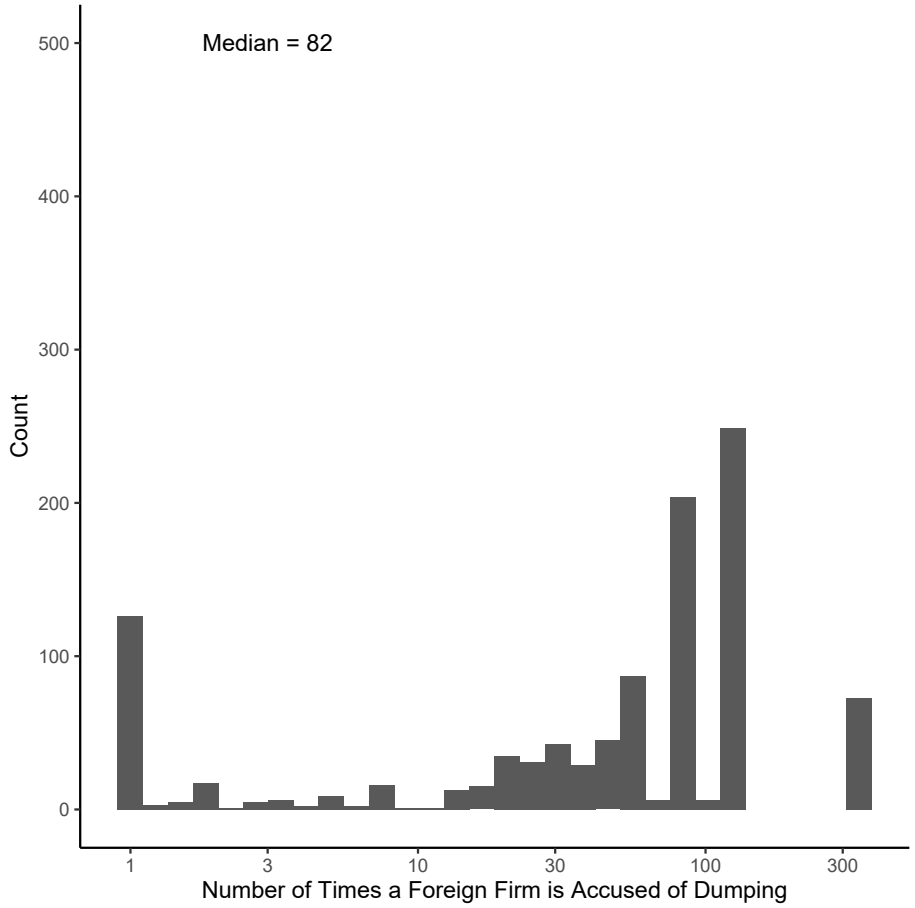
To delve deeper into the dynamics between domestic, complainant firms and foreign firms, Figure E.1a plots the distribution of times each foreign firm is mentioned in other complaints. As we can see, at the case-level, there is plenty of variation, and the median case mentions firms that are mentioned in 82 other cases.

Additionally, in Figure E.1b we show the association between asset specificity of complainant firms and the number of times the foreign firms mentioned in a case are parties of other antidumping cases. As we can see, the correlation between the two variables is very weak. This suggests that to the extent that foreign firms do engage in broad campaigns of predatory pricing, they are not typically aimed at firms with more specific assets.

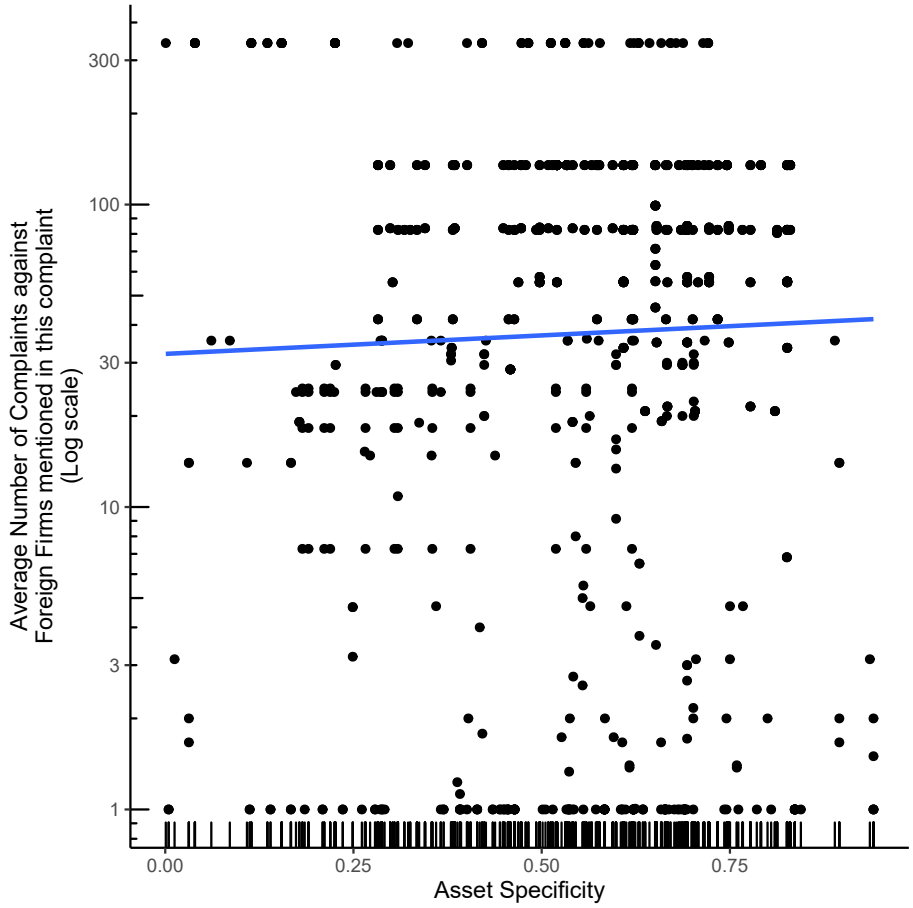
Table E.2: Characteristics of Foreign Firms and their Countries of Origin

	Dependent variable:			
	Dumping Decision	Duty Size	Dumping Decision	Duty Size
	(1)	(2)	(3)	(4)
Asset Specificity	0.303^{***}	0.753^{***}	0.261^{***}	0.522^{*}
	(0.057)	(0.256)	(0.064)	(0.293)
Other Complaints Re. Foreign Firm			-0.065^{***}	-0.273^{***}
			(0.009)	(0.039)
Country FE?	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	Yes	Yes
Firm Covariates?	Yes	Yes	Yes	Yes
Observations	1,030	1,030	1,030	1,030

*Note: Coefficients are unstandardized SAR, respectively. *, ** and *** indicate statistical significance at the 10, 5 and 1 pct. levels, respectively.*



(a) Distribution of Times the Same Foreign Firm is Mentioned in Other Complaints



(b) Do Repeat Dumpers Target Firms With Specific Assets?

Figure E.1: The Role of Repeat Dumpers. *Note: Panel A: Shows the distribution of our measure of repeat dumping. This captures important aspects of engaging in broad campaigns of predatory pricing ('repeat dumpers'). Panel B: Investigates whether repeat dumpers target firms with specific assets. On the vertical axis, we use the average number of times firms accused of dumping have been mentioned in other complaints (log scale). Asset specificity is on the horizontal axis. The association is very weak.*

The interpretation of the measure of campaigns of predatory pricing relies on complaints being independent. If they are, foreign firms that are often accused of dumping prices are likely to actually be predatory pricers. However, domestic firms might use antidumping measures strategically—if so, they can file repeat complaints against foreign competitors to keep them out of the market. As we show in Figure E.2, this does not seem to be the case—domestic firms almost never file repeatedly against the same foreign firm.

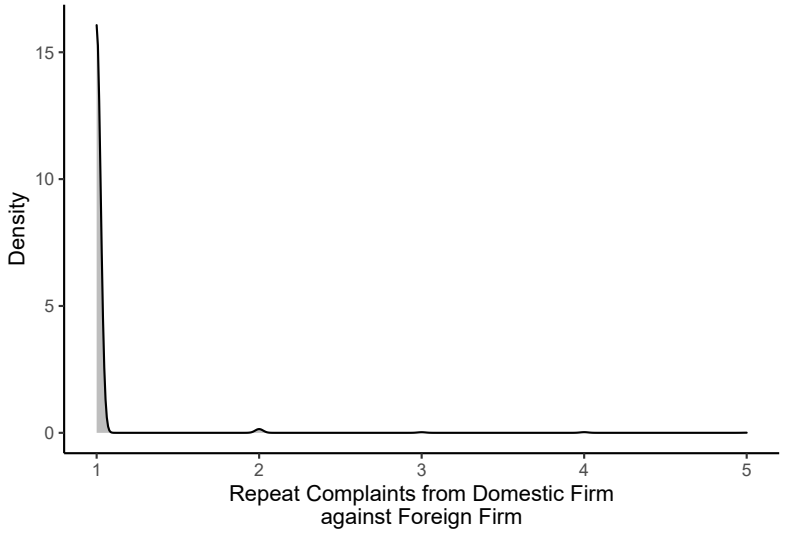


Figure E.2: Density of Repeat Complaints by Domestic Firm.

E.3 Dealing with Atypical Cases

Figure 1 in the main text reveals that some countries are outlying in their antidumping behavior. Japan, Israel and the European Union see a substantial number of complaints, but have imposed very few punitive duties in our sample. Taiwan and the Philippines only have one case each in our sample. Some of this behavior can be explained by examining the countries more closely. For example, Japan has a history of applying antidumping duties very moderately – before 2008 the country had only dealt with three antidumping complaints (Nakagawa and Hirose 2008). This indicates that in some settings, petitioning for antidumping duties might not be a best response strategy for firms. Taiwan and Israel are interesting cases to see when this might be the case. The Taiwanese government has traditionally been extremely conservative in its imposition of antidumping duties (Lo and Luo 2006). The overarching philosophy in the country's trade policy has been that while domestic producers deserve protection when they are hard pressed, open trade and integration into the international system ultimately promotes growth. Viewed through this lens, antidumping duties are undesirable, as they distort free trade. This has been at

the core of Taiwan's use of antidumping duties (Lo and Luo 2006, p. 197). Israel has moved closer to the Taiwanese strategy. Originally, the country followed a protectionist and bilateral strategy, imposing antidumping duties on foreign firms to protect the domestic industry. In the mid-2000s, however, trade policy shifted towards a more multilateral approach of working within the international institutions. This was complemented by new antidumping legislation which mirrored international standards more closely, and a more restrictive use of punitive duties (Harpaz 2006). Looking to the EU, the EU Commission deals with antidumping complaints, and treats them in a highly bureaucratic manner. This might explain the low success rate. However, we do not have a complete picture of EU antidumping behavior in our sample.

While this explains the idiosyncratic cases, it is still important that they do not drive our results. To make sure that this is not the case, we re-estimate the baseline models but exclude these countries. The results from these models are presented in Table E.3. As we can see, these atypical countries are not decisive for our results.

Table E.3: Excluding Non-Typical Countries

	Dependent variable:	
	Dumping Decision	Duty Size
	(1)	(2)
Asset Specificity	0.352***	0.921***
	(0.065)	(0.296)
Country FE?	Yes	Yes
Year FE?	Yes	Yes
Firm Covariates?	Yes	Yes
Observations	1,012	1,012

*Note: Models excluding firm-cases from Taiwan, the Philippines, the European Union, Japan, and Israel. Coefficients are from unstandardized SAR models. *** indicate statistical significance at the 1 pct. level.*

Chinese firms do not figure in our main dataset. This choice is made based on a combination of China's atypical role in the international trade system and limited data availability on the firms. China's recent accession to the WTO, means that the country is

still developing its strategy for the use of non-trade barriers (Messerlin 2004). Indeed, for the first many years, China hardly used antidumping measures (Messerlin 2004). While we have seen above that other countries change their behavior over time, too, this was known about China up front. Therefore, we did not include Chinese companies in the main models.

There is no reason, however, that the theory presented here should not apply to Chinese trade policy. Indeed, China presents an interesting out-of-sample case on which we can test the theory of asset specificity. Therefore, we collect the same data in Chinese firms as we have done for other WTO jurisdictions, and estimate the correlation between asset specificity and protection in China. Due to the small number of firm-complaints where we can get data on all covariates, we do not estimate SAR models, but rely on OLS instead. The results are presented in Table E.4. First, it should be noted that *all* Chinese cases in our sampling period were adjudicated in favor of the domestic company – there are no cases that were not ruled as dumping. This results in the weird results in column one where all coefficients are zero. There is, however, variation in duty sizes, which we leverage in column 2. Importantly, we estimate almost exactly the same coefficient as in the baseline model. For Chinese firms, the coefficient is 0.853, whereas the OLS estimate from the full sample is 0.867. This suggests that asset specificity plays a similar role in China as in the WTO jurisdictions in our sample.

E.3.1 Sensitivity to Individual Firms

This shows that our results are not driven by the idiosyncrasies of these countries. However, individual firms might still exert a large influence on our models.

To probe robustness to important firms, we pursue a broad strategy. We exclude each firm in our sample in turn and re-estimate the main models. Examining the resulting coefficient distributions will give us an idea about how much our estimates are driven by individual firms.

Figure E.3 shows the resulting distributions. As we can see, the estimates in Panels A through C are extremely concentrated around the baseline. The distributions in Panel D is more flat, but most of the estimates are actually larger than the baseline. Additionally, the coefficients below the baseline of are all above 0.0152. This suggests that the results are highly robust to the experiences of individual firms and countries.

Table E.4: Results for Chinese Firms

	Dependent variable:	
	ADD Decision	ADD Duty
	(1)	(2)
Asset Specificity	0.000	0.853**
	(0.000)	(0.329)
Revenue (logged)	−0.000	0.046
	(0.000)	(0.088)
Total Assets (logged)	−0.000	−0.073
	(0.000)	(0.096)
Taxation (logged)	−0.000	−0.127
	(0.000)	(0.141)
Constant	1.000***	4.423***
	(0.000)	(1.298)
Observations	74	74
R^2	0.506	0.111

*Note: Models base on Chinese firm complaints only. Coefficients are from unstandardized OLS models. ** indicate statistical significance at the 5 pct. level.*

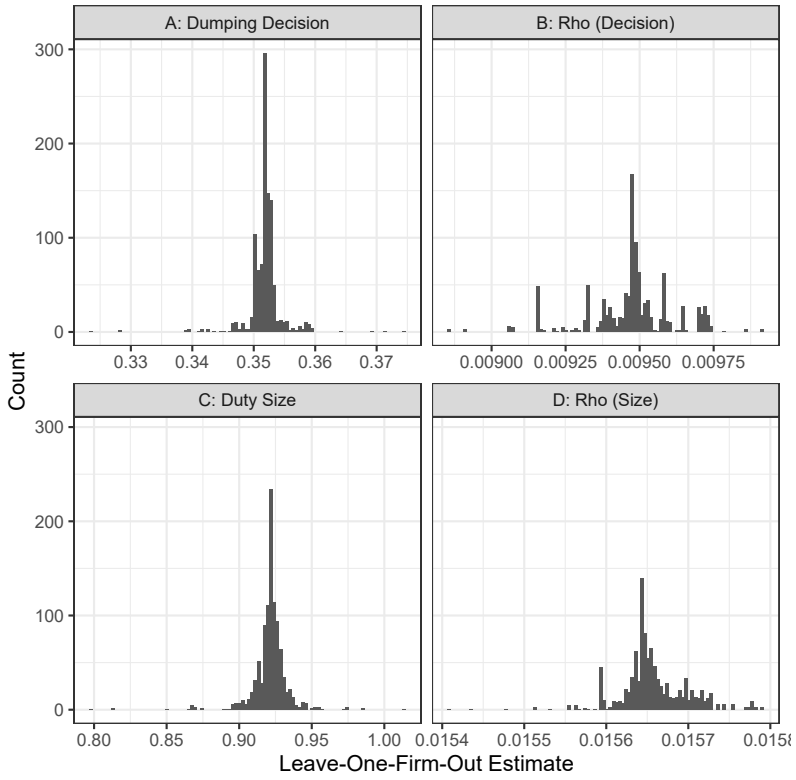


Figure E.3: Robustness to Excluding Firms. *Note: Histograms are coefficient distributions from specifications that leave one firm out at the time and re-estimate the baseline SAR models. 100 bins used. Horizontal axis limited at the minimum and maximum coefficient estimates. Firm-level covariates, country and year fixed effects are included.*

F Investigating the Mechanisms

In this section of the appendix, we present the evidence on the mechanism that we discuss in the main text. We do so in two steps.

One prominent explanation of trade policy stems from the median voter theorem (Mayer 1984; Mukherjee, Smith, and Li 2009). In these models, governments' prime concern is re-election, which implies that trade policy is determined by the median voter. Since the median voter's endowment of capital is almost always lower than the mean capital endowment, trade policy will favor labor interests (Gawande and Krishna 2003; Mayer 1984). Similarly, the median voter will also prefer trade protection as his/her main factor endowment – labor – becomes increasingly immobile (Mukherjee, Smith, and Li 2009). However, if governments mainly respond to electoral interests – rather than corporate lobbying – we should expect the correlation between immobility and protection to come about, because jobs in immobile companies are more vulnerable. When an immobile company, that also employs a lot of people, claims to be injured by international competition the government is likely – out of concern for its re-election chances – to heed its wishes and grant it protection.

In Panels C and D of F.1, we investigate this by interacting asset specificity and number of employees. We plot the marginal effect of asset immobility on Dumping Decision (Panel C) and Duty Size (Panel D) for varying levels of number of employees. It is clear that there are no statistically significant interactions.

A different – but more general – way of thinking about this mechanism is that decision-makers only accommodate companies that are fiscally consequential. Because politicians are dependent on taxes they can extract from the private sector (Bates and Lien 1985; Tilly 1985), the taxes a company pays are a highly salient way to gain political leverage. Politicians may simply disregard the preferences of immobile companies, if they do not also pay a lot of taxes. Thus, if the association between immobility and protection is driven by high-taxed companies, it may be due to the decision-maker's fiscal concerns. In panels A and B, we test this by interacting the log of taxation with asset immobility. Note that we exclude one outlying observation with negative tax payments, which would otherwise have skewed our results. Again, we are unable to reject the null of no moderating effect.

Additionally, there are a number of supply-side factors that could potentially be driving our results. If, for instance, democracies are more attuned to the preferences of their citizens, they may be more likely to use antidumping measures to circumvent inequalities induced by international trade. Should this be the case, we would expect the effect of asset specificity to vary markedly across countries, while being comparable in the context of similar political regimes. In Figure F.2, we test this proposition by using

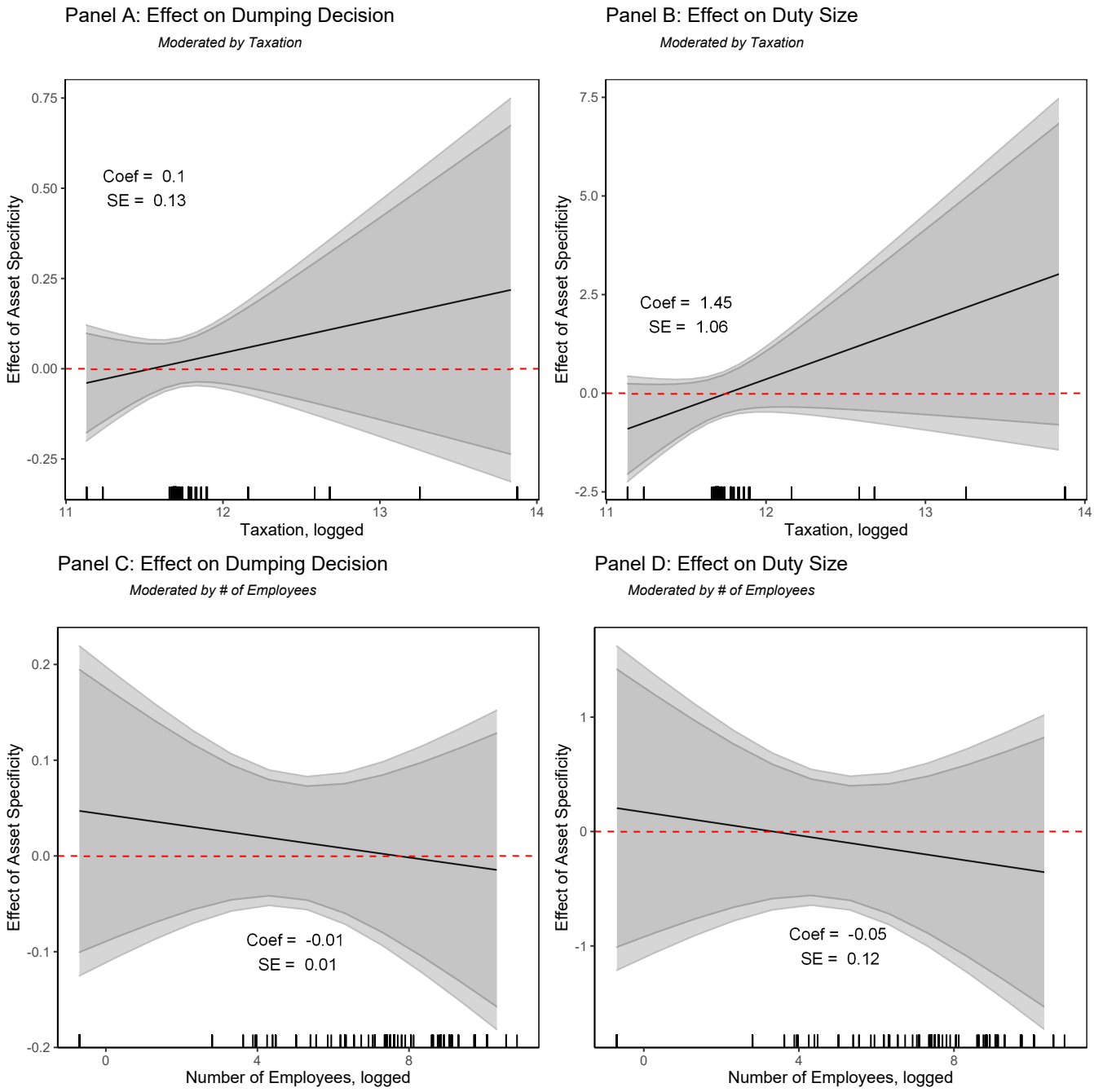


Figure F.1: Assessing Alternative Mechanisms. *Note: The figure plots the marginal effects of asset specificity with taxation (Panels A and B) and number of employees (Panels C and D), respectively, held constant at varying levels. Effects on Dumping Decision are shown in Panels A and C, while effects on Duty Size are shown in Panels B and D. Marginal effects calculated using bootstrapped coefficients. Shaded grey areas are, respectively, 90 pct. (dark) and 95 pct. (light) pointwise confidence intervals. Country and year fixed effects as well as all covariates included.*

hierarchical mixed effects models with random slopes by country, baseline controls and country fixed effects. This provides us with a general test of all supply-side explanations

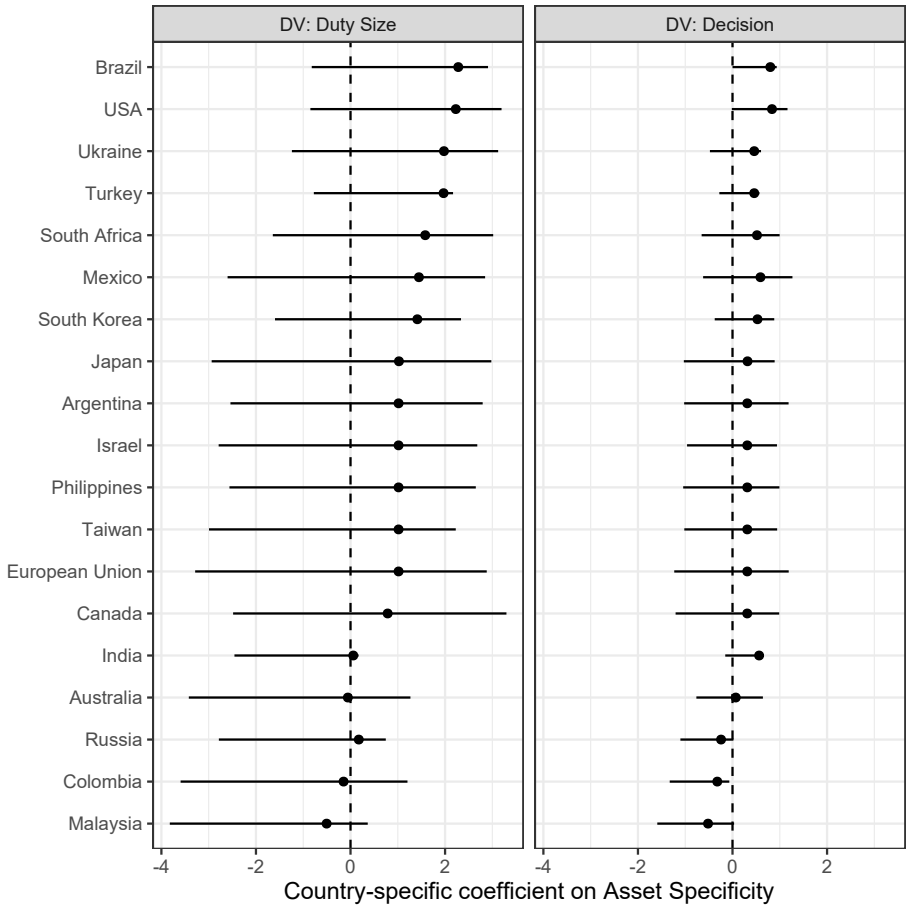


Figure F.2: Random slopes by country. *Note: Point estimates are from a linear mixed effects model with random slopes by country and all baseline controls and fixed effects included. Uncertainty estimates are 95 pct. credible intervals, which were computed by simulating 100 draws from the model, using the arm package in R.*

that would cause different effects across countries. To get uncertainty estimates for each country level coefficient that takes country-specific variation into account, we simulate 100 draws from the model posterior distribution. We use this to generate credible intervals around each estimate.

The results show that across most countries there is little variation in the effect of asset specificity – the bulk of coefficients, no matter political contexts, are clustered around very similar sizes. Three countries (Russia, Malaysia and Colombia) stand out in that they have negative coefficients, and four (Brazil, USA, Ukraine and Turkey) have somewhat larger positive coefficients than the rest. The estimates in all cases are very noisy, however. Furthermore, there are no clear commonalities in the political systems within these two groups of countries, nor are the differences between them systematic. Hence, it is not clear that these differences can be ascribed to factors at the regime level instead of simple country-level idiosyncrasies.

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