

Border Crossing: Exchange Rate Movements and the Demand for Protection

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Abstract

International political economy rests on issue-specific models of trade politics and exchange rate politics. The private actors we model, however, do not always respect the borders we draw around these issue areas. As I demonstrate, firms react to exchange rate movements by demanding trade protection. Consequently, we need to begin to replace issue-specific models with more general models of international political economy. This paper takes initial steps in this direction by incorporating exchange rate movements into the standard Ricardo-Viner endogenous tariff model. In this framework, exchange rate movements change the trade policy preferences of a subset of firms. Consequently, demands for protection rise as the currency strengthens and diminish as the currency weakens. I test the hypothesis using two measures of administered protection petition filings in the United States between 1974 and 2004. The empirical analysis yields robust support for the study's principal hypothesis.

International political economy has developed through the formulation and refinement of issue-specific models. Each group of such models depicts a tightly bounded policy area in which private actors, such as individual firms and workers, as well as the broader business associations and labor organizations that represent their collective interests, respond to issue-specific price movements by lobbying for changes in the corresponding policy. Models of trade politics, for example, explain trade lobbying as a function of the impact of product market integration on the incomes of those involved in import-competing and export-oriented production. Models of exchange rate politics explain exchange rate policy lobbying as a function of the impact of currency over- and under-valuation on the incomes of those engaged in traded and non-traded goods production. Both sets of models depict tightly self-contained worlds; changes in market integration prompt trade policy lobbying; currency movements trigger exchange rate lobbying.

There are compelling reasons to suspect that the actors whose behavior we model do not respect the borders that issue-specific theories impose. Contemporary American trade protectionism, for example, is fuelled by the belief that the Chinese currency is under-valued against the dollar. The most prominent pieces of protectionist legislation introduced in Congress in the last few years propose higher tariffs as solutions to this perceived exchange rate misalignment. Charles Schumer and Lindsey Graham, for example, proposed a 27 percent tariff surcharge on imports from China to offset the perceived currency misalignment. In the summer of 2007, the Senate Finance Committee approved legislation that enabled firms to secure antidumping duties—temporary tariff increases—on goods imported from countries determined to have “under-valued” currencies. Equally suggestive, protectionism surged in the mid-1980s as the dollar appreciated against America’s principal trading partners, and then waned in the latter half of the decade as the dollar weakened. Hence, anecdotal evidence suggests that firms regularly cross the borders that existing models draw around issue-areas.

Real-world examples such as these highlight a more fundamental problem with the issue-specific orientation of contemporary models. The underlying causal relationships at the center of issue-specific models are under-determined. Models of trade and exchange rate politics rest upon a more general “price signal—lobbying response” logic. Within this framework, disadvantageous price movements trigger lobbying activity aimed at securing policy changes that reverse the initial price movement. Yet, there is no necessary correspondence between the cause of a given disadvantageous price movement and the policy change sought by the firms that lobby in response. A tariff reduction and a currency appreciation, for example, both reduce traded goods prices and the return to firms engaged in import-competing production. As an obvious consequence, a higher tariff or a weaker currency both would raise traded goods prices and the return to a firm engaged in import-competing production. Consequently, there is no deterministic relationship between the source of a given price signal and the policy change sought by the firms that lobby in response.

Issue-specific models eliminate this indeterminacy by assumption. The borders they draw around issue areas allow us to assume that trade politics is a self-contained system in which product market integration resulting from trade liberalization is the sole source of price movements and trade policy is the sole target for the resulting lobbying. These borders allow us to assume that exchange rate politics is a self-contained system in

which exchange rate movements are the sole source of price signals and exchange rate policy is the sole target for lobbying. Such simplifying assumptions are useful in early stages of theory development, as they enable researchers to exclude complicating factors in order to clarify central causal relationships. As research programs mature, however, continued theory development involves adding theoretical complexity in place of the simplifying assumptions imposed to make initial headway. In the case of IPE, the domestic models of trade and exchange rate politics that have been at the center of theory development for fifteen years are now mature; continued theoretical development in this research program requires us to drop the assumption that issue areas are self-contained systems and begin developing models that explore how they fit together.

This paper takes initial steps in this direction by looking closely at the relationship between exchange rate movements and trade policy lobbying in the United States. I first elaborate a theoretical model in which protectionist pressure rises and falls over time in response to exchange rate movements. To do so, I incorporate the impact of exchange rate movements on factor returns into the standard Ricardo-Viner model of trade policy preferences. This framework identifies three sets of firms: firms that always gain from trade, firms that always lose from trade, and mixed-interest firms that gain from trade with a weak currency and lose from trade with a strong currency. I then discuss how collective action problems and the political institutions shape how these mixed-interest firms to respond to exchange rate movements. I argue that organizational and institutional factors channel this lobbying away from exchange rate policy and toward trade policy. The model thus suggests that the demand for protection expands as the currency strengthens, while support for trade liberalization expands as the currency weakens. I test the model's central expectation using data on demands for administered protection in the United States from 1975 until 2004. The analysis yields robust support for the hypothesis.

EXPLAINING TEMPORAL VARIATION IN THE DEMAND FOR PROTECTION

The need to integrate trade and exchange rate politics into a single model, as well as the potential gain from doing so, are usefully illustrated by considering temporal variation in protectionism. As is well known, the intensity of protectionist pressure varies substantially over time. Robert Pastor characterized this temporal variation as the “cry and sigh syndrome” in his study of American trade policy between 1920 and 1976 (Pastor 1980; 1983). In the cry phase, domestic industry groups lobby Congress for protection. Congress responds by threatening to enact protectionist legislation and simultaneously pressuring the administration to take steps to restrict foreign competition. Once the administration acts, industry lobbying eases, and Congress breathes a collective sigh of relief that it had not enacted highly protectionist measures. Pastor (1980; 1983) argued that this rise and fall of protectionist pressure characterized U.S. trade policy between 1945 and 1976.

The two measures of protectionist pressure depicted in figure 1 reveal that the cry and sigh syndrome has characterized American trade policy during the last thirty years as well. One data series in figure 1 tracks the number of petitions for administered protection (antidumping and safeguards) filed by producers each year; the other series tracks the number of congressional hearings dedicated to imports, tariffs, and the competitiveness of American industry. Both series reveal the same basic pattern.

Protectionist pressure rose sharply in the early 1980s, declined in the second half of the decade, rose sharply in the early 1990s, ebbed as the decade progressed and then rose and fell once more at the turn of the century. Protectionist pressure therefore varies substantially across time.

(Figure 1 about here)

Endogenous tariff theory, the dominant contemporary model of trade politics, cannot explain this temporal variation. Endogenous tariff theory is designed to explain cross-sectoral differences in trade policy preferences (see, e.g., Alt et al. 1999; Fordham and McKeown 2003; Hansen and Mitchell 2000; Hathaway 1998; Hiscox 1999; Hiscox 2002; Hiscox 2001; Ladewig 2006). It derives these sectoral trade policy preferences from the interaction between Stolper-Samuelson effects and inter-industry factor mobility. The Stolper-Samuelson theorem asserts that trade raises the return to society's abundant factor and lowers the return to society's scarce factor. Consequently, owners of scarce factors prefer policies that limit trade and owners of abundant factors prefer free trade.

Whether trade policy lobbying organizes around factors or sectors depends upon the degree of inter-industry factor mobility. When factors are relatively immobile across industries, trade moves the return to labor and capital employed in a given industry in the same direction: all factors in a given sector win or all factors in a given sector lose from trade. Whether trade causes factor returns in a given industry to rise or fall depends upon the relative importance of each factor in production in that industry. Factors employed in industries that use society's scarce factor intensively (import competing industries), such as apparel production in the United States, lose from trade and lobby for protection. Conversely, factors employed in industries that use society's abundant factor intensively (export oriented industries), such as pharmaceutical production in the United States, gain from trade and lobby for liberalization.

Although this Ricardo-Viner model explains why some industries want protection while other industries want trade liberalization, it cannot explain why the number of firms that demand protection or liberalization varies over time in the manner highlighted by the cry and sigh syndrome. The model asserts that trade policy demands reflect the pressure that trade exerts on factor returns. For the demand for protection to vary over time, the pressure that trade exerts on factor returns must also vary over time. Yet, Stolper-Samuelson effects exert constant rather than variable pressure on factor returns. The product market integration that results from trade liberalization exerts steady downward pressure on the return to factors employed in import-competing industries and steady upward pressure on the return to factors employed in export-oriented industries. The steady pressure exerted by these Stolper-Samuelson effects cannot explain why protectionist pressures are stronger in some periods than in others. At best, this approach suggests that the number of firms demanding protection will decline over time as import-competing firms are competed out of the market. The model provides no basis for understanding why demands for protection would suddenly escalate.

Explaining the rise and fall of protectionist demands that the cry and sigh syndrome highlights thus requires a model in which the intensity of pressure on factor returns varies over time. Incorporating the exchange rate into the standard Ricardo-Viner model of trade politics is one way to add such variation. Exchange rate movements affect factor returns—a rising currency reduces the return to factors employed in traded goods

production while a falling currency raises this return. Moreover, the dollar has varied substantially from year to year since the mid-1970s. Some years are characterized by sharp appreciations, by as much as 10 percent, and some years are characterized by sharp depreciations, as large as 18 percent. Thus, we may be able to explain temporal variation in protectionist pressure by incorporating the exchange rate into the standard Ricardo-Viner model of trade policy preferences. Variation in protectionist pressures might be driven by variations in the dollar's external value.

THE REAL EXCHANGE RATE AND THE DEMAND FOR PROTECTION

This section develops a model that incorporates the real exchange rate into the Ricardo-Viner model of trade politics. In this model temporal variation in protectionism is driven by changes in the relative size of protectionist and liberalizing coalitions. The relative size of the two coalitions changes as a function of the shifting trade policy preferences of mixed-interest firms. Mixed-interest firms' trade policy preferences are a function of the real exchange rate. During periods in which the dollar is strong, mixed interest firms become import-competing producers and thus prefer protectionism to trade liberalization. Strong currency periods thus generate a coalition between traditional import-competing and mixed interest firms and protectionist pressures rise. During periods in which the dollar is weak, mixed interest firms become export-oriented producers and thus prefer trade liberalization to protectionism. Weak currency periods thus generate a coalition between traditional export-oriented and mixed interest firms and protectionist pressures fall. Protectionist pressures thus strengthen as the currency appreciates and diminish as the currency weakens.

I assume that the level of protection at any point in time reflects the relative power of protectionist and liberalizing coalitions. Tariffs rise as the protectionist coalition strengthens and fall as the liberalizing coalition strengthens. The relative power of each coalition is based on the number of firms (perhaps weighted by their size or their importance to the relevant policymakers) in each coalition. I further assume that all firms recognize the strategic nature of trade politics. Because the tariff rate reflects the balance of power among competing interests, exiting the political arena shifts the balance of power against the exiting firm and causes tariffs to move against its interest. Exiting the political arena is therefore costly to each individual firm. As a consequence, all firms lobby continuously. Changes in the relative power of each coalition occur only as a result of changes in the preferences of existing firms; the protectionist coalition grows when some firms leave the liberalizing coalition and join the protectionist coalition. Hence, we need a model of trade policy preferences that explains why some firms' trade policy preferences change over time.

Each firm's trade policy preference is a function of the relative importance of locally abundant and locally scarce factors in their production function. Every firm employs two factors, unskilled labor (assumed to be locally scarce) and capital (assumed to be locally abundant) in some combination. All possible combinations of these two factors can be depicted along a continuous dimension. The extreme left end of this continuum is anchored by firms that rely heavily on unskilled labor and employ very little capital. Apparel production is perhaps the prototypical example. As we move along the continuum to the right, the relative importance of unskilled labor in production diminishes while the relative importance of capital (physical and human) increases. Firms

at the extreme right rely heavily on capital and employ almost no unskilled labor. Pharmaceutical and software producers are prototypical examples of this type of firm. Producers in the middle of the continuum employ substantial amounts of unskilled labor and capital. Here we might think of auto and steel producers as typical examples.

I assume that all factors are relatively immobile. Consequently, trade raises the return to both factors employed in industries that rely relatively heavily on the abundant factor and lowers the return to both factors employed in industries that rely relatively heavily on the scarce factor. Figure two graphically illustrates the relationship between the factor mix used in production and the impact of trade on factor returns. The horizontal axis depicts the capital-labor ratio, with capital assuming greater relative importance as we move to the right. The vertical axis depicts the impact of trade on factor returns. The factor return-factor mix curve therefore traces the impact of trade on factor returns as a function of the factor mix employed in production. The positive slope indicates that trade raises the return to factors as the relative importance of the locally-abundant factor in production increases. The horizontal line divides the space into two regions. Above this line is the region in which trade raises factor returns; below this line lies the region in which trade reduces factor returns.

(Figure 2 About Here)

Trade policy preferences follow directly. Firms whose factor mix falls to the right of the intersection between the factor return-factor mix curve and the horizontal dividing line are export-oriented. Because export-oriented producers employ society's abundant factor intensively, trade raises factor returns in these industries and they thus prefer low tariffs. Firms whose factor mix falls to the left of the point at which the factor return-factor mix curve intersects with the horizontal line are import-competing producers. Import-competing producers employ society's scarce factor intensively. As a result, trade lowers factor returns in these industries. Consequently, they prefer high tariffs. Firms that fall directly on the intersection of the factor return-factor mix curve and the horizontal line are mixed interest firms. Such firms are neither export-oriented nor import-competing, for the impact of trade on factor returns in these industries is zero. It is perhaps more realistic to conceptualize mixed interest firms as populating a region rather than a point, as suggested by the dashed horizontal lines in figure 2. As the name suggests, the factor mix that mixed-interest producers employ does not generate a stable trade policy preference. Instead, mixed-interest firms' trade policy preferences change from one period to the next for reasons we now develop.

We can now incorporate the real exchange rate into this framework. Real exchange rate movements—appreciation and depreciation—alter the return to factors employed in traded goods production. Currency appreciation reduces the return to factors employed in traded goods production, while currency depreciation raises the return to these factors. A real exchange rate movement thus functions as a parameter shift on the factor return-factor mix curve (see figure 3). A real exchange rate appreciation shifts the factor return-factor mix curve down in the two-dimensional space. Moreover, larger appreciations generate downward shifts of greater magnitude. Currency depreciation shifts the factor return-factor mix curve up in the two-dimensional space. Larger depreciations generate larger upward shifts of the factor return-factor mix curve.

(Figure 3 about here)

Movement of the factor return-factor mix curve caused by real exchange rate movements alters the trade policy preferences of mixed-interest firms. Exchange rate appreciation pushes mixed-interest producers firmly into the region of falling returns from trade. Because mixed interest firms are now import-competing producers, they prefer protection. Conversely, currency depreciation pushes mixed-interest producers into the region of rising factor returns. Because mixed interest firms are now export-oriented producers, they prefer trade liberalization. Exchange rate movements thus change the trade policy preferences of mixed interest firms by shifting them between import-competing and export-oriented status. Mixed interest firms become import competing firms that prefer high tariffs during strong currency periods and export oriented firms that prefer low tariffs during weak currency periods.

Exchange rate movements can, in theory, alter the trade policy preferences of export-oriented and import-competing producers. In practice, however, currency movements are rarely large enough to actually alter these preferences. Although the return to export-oriented producers falls as the currency strengthens, the typical currency appreciation is not large enough to eliminate the positive gain from trade enjoyed by factors employed in export-oriented production. Hence, with the typical currency appreciation, protection never benefits export-oriented producers. If the appreciation is atypically large, however, export-oriented producers can become protectionist. Conversely, the return to import-competing producers rises as the currency weakens, but the typical depreciation is never large enough to offset the disadvantage these producers suffer from their intensive use of the locally scarce factor. These firms can, in theory, become export oriented producers with sufficiently large currency depreciation, but the magnitude of the required depreciation is so large as to be a very rare event.

Temporal variation in protectionism is thus driven by changes in the relative power of protectionist and liberalizing coalitions. These changes are in turn caused by the impact of currency movements on the trade policy preferences of mixed-interest firms. In strong currency periods, mixed-interest firms join with import-competing producers to pressure for protectionism. As the protectionist coalition strengthens, tariffs rise. In weak currency periods mixed-interest firms join forces with export oriented producers to lobby for trade liberalization. As this coalition forms, the balance of power shifts in favor of trade liberalization and tariffs fall. Protectionism thus rises in strong dollar periods and falls in weak dollar periods. Moreover, the magnitude of the coalition change, and thus of the resulting change in protectionist or liberalization pressure, will be a function of the magnitude of the exchange rate movement. Larger currency appreciations (depreciations) shift longer segments of the factor return-factor mix curve—and thus more firms—into the import-competing (export oriented) space. Hence, larger currency movements generate larger shifts in trade policy coalitions than small currency movements.

WHY LOBBY TRADE POLICY? INSTITUTIONS AND THE TARGET OF LOBBYING

Although exchange rate movements alter the preferences of mixed interest firms, it does not follow that these firms will respond to currency movements by lobbying for changes in trade policy. As I noted in the introduction, there is no deterministic relationship between a given price signal and the target of the resulting lobbying activity. Explaining how firms respond to disadvantageous price movements, therefore, requires

additional theory. The need for such theory is all the more important in this case, as the hypothesis advanced here stands in contrast to the expectation of the standard model of exchange rate politics in which producers respond to exchange rate movements by lobbying for changes in exchange rate policy (see Frieden 1997; Frieden 1991; Frieden 2002).

One approach to reducing the indeterminacy inherent in the price signal—lobbying response framework is to explore how the structure imposed by political institutions shapes producers' responses to disadvantageous price movements. Much as water follows the path of least resistance, we would expect firms to respond to a disadvantageous price movement by choosing a target that delivers the greatest expected payoff for the least amount of effort. At the risk of pushing the metaphor too far, political institutions function as a system of levies and spillways that channel lobbying activity; directing interest group activity away from some parts of the political system while simultaneously allowing (and even encouraging) lobbying activity in other parts of the system. We would expect lobbying activity to flow toward those places in the political system that offer effective relief at relatively low effort and away from those that offer relief at a higher effort.

In the context of how firms respond to exchange rate movements, we thus want to think about how institutions discourage lobbying that targets exchange rate policy and encourage lobbying that targets trade policy. I suggest that three such factors, two quite general and one more context dependent, combine to channel lobbying activity away from exchange rate policy and toward the trade policy process. The first general factor is the recognition that from the perspective of an individual firm facing increased import competition as a consequence of an exchange rate appreciation, a tariff increase offers relief every bit as effective as currency depreciation. Both measures raise the domestic price of the good the import-competing firm produces and, therefore, raises the return to the factors employed in its production. In fact, an individual firm might even prefer a tariff increase to currency depreciation. The combination of a high tariff and a strong currency enable an individual firm to have the best of both worlds: a higher domestic price for the good it produces and lower prices for its inputs. Whether an individual firm prefers a tariff increase to currency depreciation is less important, however, than the recognition that the two remedies have equivalent effects on the domestic price of the firm's output and thus on the return to factors employed in that activity. Thus, a firm has no reason to prefer depreciation over a tariff increase.

The second general factor is that collective action problems are likely to be less severe when organizing to influence trade policy than when organizing to influence exchange rate policy. Tariffs are characterized by highly concentrated benefits and widely diffused costs. Because a tariff falls on a single product, the beneficiaries from a given tariff increase are the relatively small number of homogeneous firms within the protected industry. The combination of small numbers and homogeneous interests facilitates organization. Firms will therefore find it relatively easy to assemble industry-specific pro-tariff pressure groups.

In contrast, the benefits from currency depreciation are dispersed across all firms in the traded goods sector. Moreover, the interests of these firms only partially overlap—they agree on the need for currency depreciation, but disagree about exchange rate stabilization (Frieden 1991). Import-competing firms will advocate a weak and floating

currency so that the monetary authority can use monetary policy to manage domestic demand. In contrast, export-oriented firms will advocate a weak and relatively stable (or fixed) currency, because they are less dependent on the domestic market and thus more willing to sacrifice monetary policy autonomy in order to stabilize the exchange rate.¹ The combination of large numbers and heterogeneous interests increases the difficulties associated with and raises the cost of collective action intended to change exchange rate policy. Hence, firms are likely to be better able to organize a lobby group to pressure for tariff protection than currency depreciation.

Finally, specific political institutions may further encourage firms to seek tariff protection rather than currency depreciation. In the American context, the political institutions that structure trade policy provide a relatively open process that firms can easily access. Firms seeking tariff protection have two avenues along which to pursue this goal. Along one avenue firms can lobby individual legislators in pursuit of tariff legislation. Because representation is based on geographically-distinct congressional districts, individual legislators have incentive to respond to demands from firms located within their district (Alt et al. 1996; Alt and Gilligan 1994). Firms can also turn to the administrative agencies established expressly to provide protection to domestic producers facing import competition. The International Trade Commission and the International Trade Administration both provide an open and easily (though not cheaply) accessed process for firms seeking higher tariffs. Trade policy institutions, therefore, provide multiple avenues through which firms can pursue protection.

In contrast, the political institutions that structure exchange rate policy establish a relatively closed policy process that firms cannot easily access or influence. Exchange rate policy in the United States is set through cooperation between the Federal Reserve and the U.S. Treasury (Destler and Henning 1989). As an independent central bank, the Federal Reserve is not readily influenced by individual firms or by legislators acting on behalf of individual sectors. The Treasury is an executive branch department staffed by appointed rather than elected officials. Consequently, Treasury officials, even at the highest levels, have little direct electoral incentive to respond to demands from individual firms or industry lobby groups. Treasury officials may have a broader electoral incentive to enact specific policies. Yet, because the executive represents a broad, national constituency it must balance the interests of the traded goods sector against the interests of the non-traded goods sector and the finance industry, neither of which strongly prefers a weak currency to a strong currency. In short, individual firms have restricted access to the exchange rate policy process, and even where such access exists, the officials who set exchange rate policy lack strong incentive to respond to their demands. Firms will therefore find it relatively easier to access the trade policy process than the exchange rate policy process.

In short, mixed-interest firms have incentive to respond to currency appreciation by seeking higher tariffs for three inter-connected reasons. First, from the point of view

¹ Mixed-interest and import-competing firms might prefer a tariff to depreciation because the exchange rate remedy may require the government to use monetary policy to stabilize the currency at the depreciated rate rather than to manage domestic demand. Introducing a second policy instrument (the tariff) enables import competing firms to achieve both objectives; monetary policy manages demand, tariffs regulate the price of traded goods. This is a variant of the instrument-target paradigm in which the number of policy instruments must match the number of policy targets (Tinbergen 1952).

of an individual firm, a tariff is an effective substitute for currency depreciation—both measures increase factor returns in the industry. Second, firms can more readily overcome the obstacles to collective action in trade policy than in exchange rate policy. The concentrated benefits and diffuse costs that characterize a tariff reduce the severity of the collective action problem compared to the diffuse benefits generated by currency depreciation. Finally, political institutions reinforce the incentive to seek a tariff remedy. The tariff policy process is open and relatively easy for firms to access while the exchange rate policy process is closed and more difficult to access. Consequently, firms will find it relatively easier to organize and exert pressure on the trade policy process than to organize and effectively lobby the exchange rate policy process.

To summarize, temporal variation in protectionism is driven by changes in the relative size of the import competing and export oriented coalitions. The two coalitions change size as a function of the changing preferences of mixed-interest firms. During strong dollar periods, mixed interest firms are pushed into import-competing status. Strong currency periods thus generate a coalition between traditional import-competing and mixed interest firms. During weak dollar periods mixed interest firms are pushed into export-oriented status and form a coalition with traditional export-oriented firms. Institutional factors—the relative severity of organizing for collective action and the ease of effectively accessing the political system—create incentives to engage in lobbying activity that targets trade policy. Consequently, protectionist pressures rise as the currency appreciates and diminish as the currency weakens.

DATA

The theoretical framework developed above yields three distinct testable hypotheses. First, on the demand side, it hypothesizes that private industries' demands for protection vary with exchange rate movements. More firms will seek protection during strong currency periods than in weak currency periods. Second, on the supply side, it hypothesizes that the amount of protection (the height of applied tariffs and other non-tariff barriers) that governments supply is responsive to demand, and thus also varies with exchange rate movements. Finally, the framework hypothesizes that organizational and institutional factors structure firms' political activity and, by doing so, link exchange rate movements to the demand for and the supply of trade protection. Space limitations preclude a full test of all hypotheses. Instead, I focus attention here on what must be considered the foundational hypothesis: the demand for protection is a positive function of the real exchange rate. This demand-side hypothesis is foundational because if empirical analysis fails to support this hypothesis, the other hypotheses are irrelevant. If empirical analysis supports this hypothesis, however, then subsequent research can test the other elements of the broader causal argument.

I test this foundational hypothesis using data on the demand for protection in the United States from 1974 through 2004.² I measure the demand for protection by summing the number of petitions filed in each year in the two most commonly employed forms of

² The length of the time series is dictated by the availability of an index of the dollar's trade weighted real exchange rate. Indices prior to 1975 are available only for the nominal exchange rate; the U.S. government maintained the dollar at a relatively stable nominal exchange rate within the Bretton Woods system until 1973.

administered protection: anti-dumping investigations and safeguard investigations (Section 201). Both forms of administered protection offer domestic industry temporary tariff relief. Each provides a different standard for gaining such relief. Both avenues require the industry seeking relief to be harmed by imports. Successful antidumping petitions must also demonstrate that the imports causing harm are sold in the U.S. market at below their cost of production. A positive finding in an antidumping investigation results in a mandatory tariff increase to offset the dumping margin. In safeguards investigations, a positive finding is a recommendation that the president can ignore. Data for both come from the *USITC Import Injury Investigation Case Statistics* (United States International Trade Commission 2005). Each annual observation is a count of the number of petitions for relief filed. For antidumping petitions, the series ranges from a low of 14 petitions to a high of 94 with a mean of 44. For safeguard petitions, the series ranges from a low of 12 petitions to a high of 178 with a mean of 60. The anti-dumping series runs from 1974 through 2004; the safeguard series begins in 1980 and ends in 2004.

While antidumping and safeguard petitions are direct measures of firms' demands for administered protection, they also are proxies for the broader protectionist pressure that firms exert through all channels. The administrative process has been the most important channel through which industry seeks protection since the late 1970s (see e.g., Destler 2005). Congress has not directly set tariff rates on a regular basis since 1934. Instead, it created two alternative tariff-setting procedures. On the one hand, it delegated authority to the executive to set tariffs through international negotiation. On the other hand, it established a system of administrative law that enables individual firms to seek tariff protection under well-defined circumstances (unfair trade for anti-dumping and import surges for safeguards). Consequently, industry demands for protection get channeled into the administrative process. Because administered protection is a central component of the trade policy process, variation in the demand for administered protection should be a relatively unbiased measure of broader protectionist pressures within the political system. A glimpse back at figure 1 supports this contention, as demands for administered protection rise in periods of broader protectionist sentiment (the mid-1980s, the early 1990s, the current era) and also nicely correspond with congressional hearings. Moreover, Congressional activity is highly correlated (statistically significantly) with administered protection petition filings.

Administered protection petition filings provide a better proxy for this broader conception of protectionist pressures than other possible measures. Alternative measures introduce substantial measurement error because they require comparison of things that are not strictly comparable. Counting the number of trade bills introduced in Congress each year, for example, requires decisions about the weights to attach to each bill. Should one weigh an omnibus trade bill (that might contain a large number of protectionist measures and a large number of liberalizing measures) the same as an industry-specific tariff bill? How should one weigh legislation that changes the rules governing the administered protection process? How does one handle bills that are liberalizing rather than protectionist? Should a liberalizing bill be subtracted from a count, should it be ignored? Nor can one readily compare counts of trade bills across time. How much confidence do we have that twenty-five trade bills introduced in one year are identical to twenty-five different trade bills introduced the next year?

Antidumping and safeguard petitions minimize such measurement problems by aggregating individual items that are directly comparable in each year and over time. Antidumping and safeguard petitions filed by one firm are directly comparable to petitions filed by other firms. If in year t twenty-five firms filed petitions and in year $t+1$ thirty-five firms filed petitions, we know that the number of firms demanding protection increased by ten. Hence, petitions for administered protection offer a consistent measure of industry demands for protection across time. Moreover, petitions for administered protection are a direct measure of the number of firms willing to dedicate resources to the pursuit of a higher tariff.

I construct the principal explanatory variable, *Exchange Rate*, from an index of the dollar's real trade-weighted value against other major currencies. A broad currency index is more appropriate than a bilateral exchange rate, for the broader measure provides a more accurate measure of change in the price competitiveness of US traded goods producers relative to the rest of the world. The particular index I employ, constructed by the Federal Reserve Board, includes European currencies, Australia, Canada, Japan, Sweden, Switzerland, and the United Kingdom. Each observation is the lagged percentage change from year $t-1$ to year t . A positive number indicates a real appreciation and a negative number indicates a real depreciation. I expect a positive coefficient on this variable: the economy-wide demand for protection will increase as the dollar appreciates.

The small sample size limits the number of factors for which I can control. Hence, I focus on factors emphasized by previous research. The business cycle is the most important alternative hypothesis advanced to account for temporal variation in protectionism. The business cycle hypothesis asserts that tariffs rise during recessions and fall during booms because more firms demand protection in recessions than in booms (see, e.g., Cassing, McKeown, and Ochs 1986; Gallarotti 1985; Grilli 1988; McKeown 1984; Takacs 1981).³ I employ three macroeconomic indicators that previous studies have employed as measures of the economy's position in the business cycle: *GDP Growth*, *Unemployment*, and *Capacity Utilization*. *GDP Growth* is the annual percentage change in Gross Domestic Product. *Unemployment* is the percent of the civilian labor force actively seeking employment. *Capacity Utilization* is the percent of existing manufacturing capacity in use. I expect a negative coefficient on *GDP Growth* and *Capacity Utilization*, while *Unemployment* should return a positive coefficient.

I also control for *Import Growth*. Common wisdom suggests that the exchange rate and imports move together. A stronger dollar reduces the domestic cost of foreign goods, resulting in greater demand for imports. A weaker dollar will raise the domestic cost of imports, and we would therefore expect imports to fall. Were I to estimate a model that included exchange rate movements but excluded import growth, I would risk attributing changes in the demand for protection to exchange rate movements when in fact they are a function of greater import competition. *Import Growth* is the annual

³ The literature has yet to offer a general theoretical model that can account for this pattern of industry lobbying. Existing models explain why firms lobby for protection during recessions, but all struggle to explain why many of these same firms stop lobbying for protection during booms. McKeown (1984) candidly notes that his rationalist model cannot explain tariff reductions during booms while his satisficing model allows them but does not strongly predict them. Cassing et al (1986) offer an explanation that is contingent on very specific (i.e., non-general) assumptions about industry location, firm ownership, and political representation.

percentage change in imports. I expect a positive coefficient on this variable: demand for protection rises in response to an increase in imports.

Finally, I control for two characteristics of the political system. *President's Party* (coded Democrat=0, Republican=1) controls for the president's political party. I do not have strong prior expectations about the direction of this effect. I discuss the substantive meaning below. I also controlled for two presidential election years with dummy variables, one for 1988 and one for 1992. I discuss this in greater detail below. The data sources, summary statistics, as well as the data, are provided in an appendix to this paper.

ANALYSIS AND FINDINGS

Because the dependent variable is a count of the number of petitions filed in each year, standard OLS is not appropriate. Count data are typically non-normally distributed; they are always truncated at zero and they are commonly skewed. Employing ordinary least squares to estimate models against count data can therefore produce estimates that are biased, inefficient, and inconsistent. I rely instead on poisson regression. As I discuss below, the results do not change substantially if the models are estimated with negative binomial regression rather than poisson regression.

The results from the analysis are presented in table 1. As a group, the models highlight a consistent set of relationships across the two measures of industry demands for protection. The goodness of fit statistics suggest that the models fit the data relatively well. The models return significant log likelihood ratios in spite of the small sample size while the pseudo R-squared statistics suggest that the models account for between one-third and one-half of the variation in the sample.

(Table 1 About Here)

This study's principal hypothesis is strongly supported across measures and specifications. Exchange rate movements are significant predictors of variation in protectionist pressure. The positive and statistically significant coefficient on *Exchange Rate* in all models indicates that as the dollar appreciates against the United States' principal trading partners, protectionist pressures increase substantially. The magnitude of the effect of an exchange rate movement is large in both administrative channels, but larger in safeguards than in anti-dumping investigations. With other variables set at the mean, a one standard deviation exchange rate appreciation (roughly a seven percent real appreciation) generates between 9.5 and 13.5 additional anti-dumping petitions. This represents an increase of almost one-third of the annual average number of petitions. A dollar depreciation of the same magnitude reduces AD petition filings, but they fall off less rapidly than they increase. Safeguard petitions are even more responsive to dollar appreciation. A one standard deviation dollar appreciation generates twenty-five additional safeguard petitions. As with anti-dumping petitions, dollar depreciation reduces safeguard petition filings, but by a smaller amount. A one standard deviation depreciation yields seventeen fewer safeguard petitions. Hence, controlling for other factors, the intensity of protectionist pressures is highly sensitive to changes in the dollar's value, though safeguard petitions are more responsive than AD petitions to a given exchange rate change.

The models return underwhelming support for the business cycle hypothesis. The anti-dumping investigation models provide no evidence that the business cycle has an

impact on petition filings. None of the three indicators of the business cycle yield statistically significant coefficients. The models provide some evidence that safeguard petitions are responsive to business cycle developments, but the results are not consistent across the three measures. The coefficient for *GDP Growth* is positive in the safeguards model, indicating that more firms file safeguard petitions in periods of robust growth than in periods of weak or negative growth. This finding directly contradicts the business cycle's core expectation. *Unemployment* returns the expected positive coefficient in the safeguards model, but is only weakly significant. *Capacity Utilization* returns a strongly significant negative coefficient, indicating that safeguard petitions rise as capacity utilization rates fall, strong support for the business cycle hypothesis. Hence, the models provide some evidence that protectionist demands are responsive to the business cycle, but do not return the consistent results one would like to see in order to have confidence in this relationship. Moreover, and more importantly, exchange rate movements remain an important cause of the economy-wide demand for protection even when we control for the business cycle.

Import Growth is significant in four of the six models, and has a greater impact on antidumping petition filings than on safeguard petition filings. *Import Growth* is highly significant and positive in all of the antidumping petition models. The positive coefficient on *Import Growth* indicates that firms are more likely to file antidumping petitions in periods of rapid import growth. The effect is substantively important. With all other variables set at their mean, increasing the rate of import growth by one standard deviation above the mean (roughly a six percentage point jump) generates an additional eleven anti-dumping petitions. The statistical significance of *Import Growth* in the safeguards models appears to be sensitive to the measure of the business cycle employed. *Import Growth* is significant and positive in the model that includes *Unemployment*, but not in the models that include *GDP Growth* and the *Capacity Utilization* models. Thus, *Import Growth* appears to have a substantial impact on antidumping petition filings but has a much weaker impact on safeguard petition filings. Again, however, the more important point is that the relationship between exchange rate movements and the economy-wide demand for protection is robust to the inclusion of *Import Growth*.

The political control variables warrant some discussion as well. *President's Party* has a positive and significant impact on anti-dumping and safeguard petitions. The findings indicate that firms file significantly more petitions under Republican administrations than they do under Democratic administrations. The substantive impact is large. With all other variables set at their mean, a shift from a Democrat to a Republican administration is associated with nineteen additional anti-dumping petitions and twenty-three additional safeguard petitions. The model also suggests that the demand for protection is more responsive to exchange rate movements under Republican than under Democratic administrations. That is, a given exchange rate appreciation generates more petitions under Republican administrations than under Democratic administrations. This is particularly apparent in safeguard petitions, wherein a one standard deviation appreciation generates twenty-nine additional safeguard petitions under a Republican administration compared to only nineteen additional petitions under a Democrat. The model provides evidence, therefore, that the demand for protection has been stronger under Republican administrations than under Democratic administrations.

This finding may reflect firms' beliefs about the relative willingness of the two political parties to provide protection. If firms' demands for protection are based at least in part on some ex ante estimate of the probability of success, then this finding is consistent with the assertion that firms believe that Republican administrations are more likely to offer tariff protection than Democratic administrations. The fact that the partisan gap is larger in safeguard than in anti-dumping petition filings is consistent with this hypothesis. The president makes the final decision about raising tariffs following a positive agency finding in safeguard investigations but not in anti-dumping cases. Hence, firms file more safeguard petitions under Republican than under Democratic administrations because they believe that Republican presidents are more likely than Democratic presidents to raise tariffs following a positive finding. The steel industry's recent experience is illustrative; President William J. Clinton refused to raise steel tariffs following an ITC safeguards investigation; President George W. Bush agreed to do so. Of course, the empirical models do not directly address this question, but do suggest it might be a fruitful path for additional research.

The 1988 and 1992 *Presidential Election Year* dummy variables also return positive and significant coefficients against both dependent variables. This relationship is specific to these two election years, rather than a broader presidential election year effect. I ran models that employed individual dummy variables for each presidential election year; only 1988 and 1992 returned significant coefficients. Hence, the narrower conclusion, (the demand for protection was higher in the 1988 and 1992 presidential election years) is more accurate than the broader specification (the demand for protection is higher in presidential election years than in other years. These findings may be tapping into the high salience of trade policy in the late 1980s and early 1990s. This may suggest that firms are more likely to seek tariff protection when trade policy is a salient and conflictual issue in a presidential election.

While the political dynamics these control variables suggest are interesting, it is important to note that the incorporation of these political variables do not weaken the relationship between exchange rate movements and the economy-wide demand for protection. Nor, for that matter, is the relationship between exchange rate movements and the demand for protection dependent upon the inclusion of these dummy variables in the model. These variables improve the fit of the model, but do not affect the significance of the primary hypothesis under investigation

Finally, the relationship between exchange rate movements and protectionist pressure is robust to alternative methods of model estimation and model specification. I estimated the same set of models reported here using negative binomial regression in place of poisson regression. This alternative procedure yielded results regarding the exchange rate hypothesis essentially identical to those obtained from the poisson estimates. The only difference across the two sets of models that has substantive importance is that whereas business cycle variables had some impact on safeguard petition filings in the poisson models, none of these variables returned statistically significant coefficients in the negative binomial regression models. *Exchange Rate* returned statistically significant and positive coefficients in all of the negative binomial models with coefficients not greatly different in magnitude than those generated by the poisson models. Hence, the results that speak directly to this study's primary hypothesis are robust to estimation procedure. I also estimated versions of the model that

incorporated a lagged dependent variable; the lagged variable was never statistically significant and its inclusion in the models did not substantially alter the results reported here. The empirical analysis thus provides robust support for this study's principal hypothesis. The demand for protection rises and falls in response to exchange rate movements. The protectionist pressure grows stronger as the dollar appreciates and weakens as the dollar depreciates.

CONCLUSION

This paper demonstrates that exchange rate movements have been an important cause of the rise and fall of protectionist pressure in the United States since the mid-1970s. Firms file a substantially larger number of anti-dumping and safeguard petitions in strong dollar periods than in periods during which the currency is relatively weak. The relationship between exchange rate movements and protectionist pressure holds even once we control for other likely causes of protectionist pressure, including import growth and the economy's position in the business cycle. The analysis not only confirms that exchange rate movements are an important cause of protectionist pressure, but also suggests that exchange rate movements have a more systematic impact on protectionist pressure than the broader macroeconomic developments emphasized by the business cycle hypothesis. Whereas the exchange rate was always a significant predictor of protectionist pressure, the relationship between the business cycle and protectionist pressure was highly sensitive to the measure used and model specification.

My conclusions about the important role of exchange rate movements in explaining the demand for protectionism are based on a theoretical model that strives to integrate existing models of trade and exchange rate politics. I argued that real exchange rate movements drive temporal variation in protectionist pressure because they change the trade policy preferences of a subset of domestic producers. These mixed interest firms are internationally competitive and export-oriented when the currency is weak and thus prefer trade liberalization in weak currency periods, but become uncompetitive and import competing and therefore protectionist in strong dollar periods. Protectionism rises as these mixed interest producers align with import-competing firms in strong currency periods and protectionism falls as mixed interest producers align with export-oriented firms when the currency weakens. Moreover, I argued that organizational and institutional factors encourage firms to seek tariff relief in response to currency appreciation.

The robust empirical support for the foundational hypothesis indicates that further research along the lines pursued in this paper could be quite fruitful. Such future research might usefully develop in two directions. Along one path it may prove useful to deepen the empirical evidence bearing on the foundational hypothesis. One could extend the empirical scope beyond the American context, further back in time, or examine alternative measures of protectionism. A small literature does expand the country scope; Knetter and Prusa (2003) report findings similar to those reported here for Canada, Australia, and the European Union between 1980 and 1998, while Niels and Francois (2006) report a similar pattern in Mexico. Irwin (2005) reports similar findings for the United States based on a nominal exchange rate index. The current study is the first to examine the relationship between exchange rate movements and trade policy remedies other than antidumping petitions. One might usefully explore whether exchange rate

movements affect other measures of protectionism to discover whether the relationship is specific to administered protection or is instead more general. Doing so might well require historical research, given the central importance of administered protection (as opposed to legislated tariffs) as a trade policy instrument in the contemporary era. More broadly, it might prove fruitful to move beyond the two-issue framework examined here and incorporate other policy domains, both as a source of the causal price signal and the target of the resulting lobbying response.

A second line of research might evaluate the untested component of the argument advanced here: that institutional structures shape how firms respond to disadvantageous price movements. This institutional hypothesis has a specific and a more general variant. The specific variant concerns the arguments advanced herein that U.S. institutions encourage firms to respond to exchange rate movements by lobbying for changes in trade policy. Do firms find it easier to organize around trade than exchange rates? Do they find it easier to gain access to the trade policy process than to the exchange rate policy process? Do these differences explain why firms respond to exchange rate movements by demanding protection? It might be particularly interesting to explore this question in the context of the European Union where the institutional change associated with the shift to monetary union may have altered how firms respond to currency appreciation. Prior to monetary union, firms may have responded to currency appreciation by lobbying national governments for currency devaluation. The implementation of EMU, by making it more difficult for national producers to access and influence monetary and exchange rate policy, may have created incentives to seek tariff protection instead. Finding empirical evidence about these processes will provide greater confidence in the underlying causal argument advanced here.

The more general variant of the institutional hypothesis concerns the broader claim that firms' responses to price movements are shaped by institutional structures. This more general variant does not assert that exchange rate movements necessarily trigger trade policy lobbying. Sometimes exchange rate movements trigger exchange rate lobbying. The question is what are the institutional conditions under which firms respond across issue areas and what are the conditions under which they respond within issue areas? State differently, do political institutions determine the degree of indeterminacy inherent in the price signal—lobbying response framework? If so, what institutional configurations limit this indeterminacy, generating within-issue lobbying activity, and what configurations do not limit and thus give rise to across-issue activity? Further research along these lines would enhance our understanding of how political institutions shape the political strategies that firms adopt in pursuit of their interests.

Finally, the paper carries a broader message for international political economy research. As I argued in the introduction, IPE has developed on the basis of issue-specific models of domestic politics. The endogenous tariff and endogenous exchange rate theories incorporated here are the products of this concerted effort. These models unquestionably provide solid building blocks, but this paper highlights the central limitation of their underlying assumption. Issue-specific models draw borders around policy areas and treat each issue as a self-contained system. There are good analytical reasons to impose such borders; borders simplify and thus make tractable the challenging task of modeling already complex phenomenon. Yet, the research reported here suggests that the private actors whose behavior we model often have little incentive to respect the

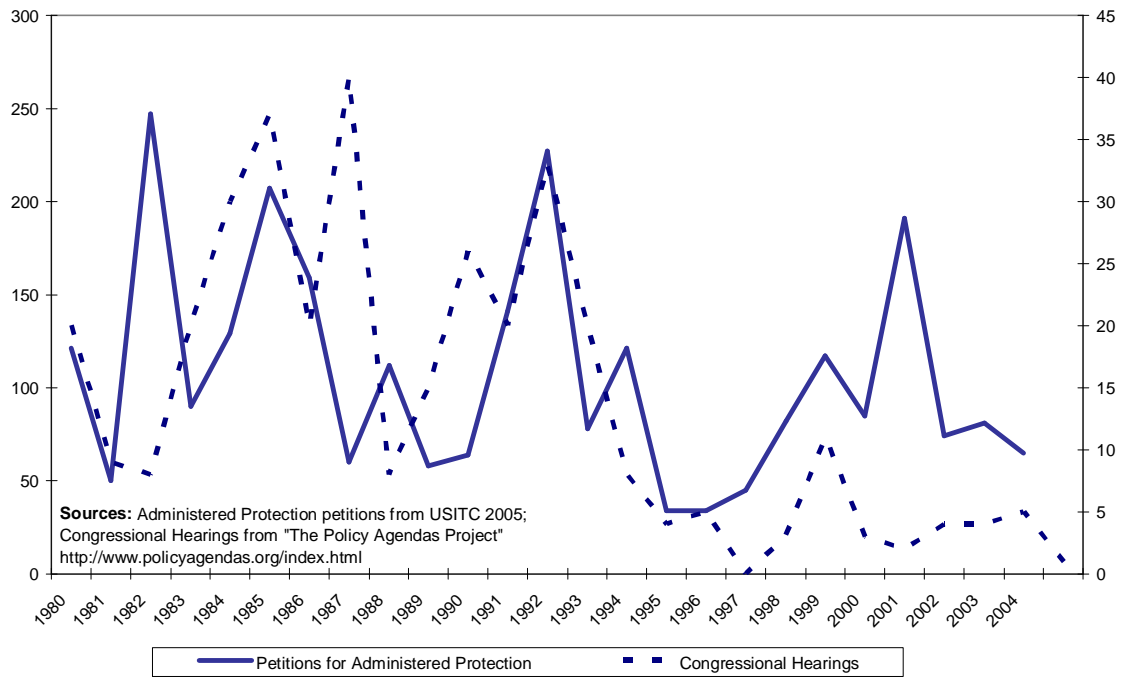
analytical borders that we impose. The next step in theory development entails dropping this assumption and beginning to explore the political dynamics that result when we link them together and embed them in a broader political and institutional context. In short, we have built a stable foundation during the last fifteen years; continued progress requires us to begin construction of the more complex models that these foundations are designed to support.

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Figure 1: Protectionist Pressures, 1980-2004



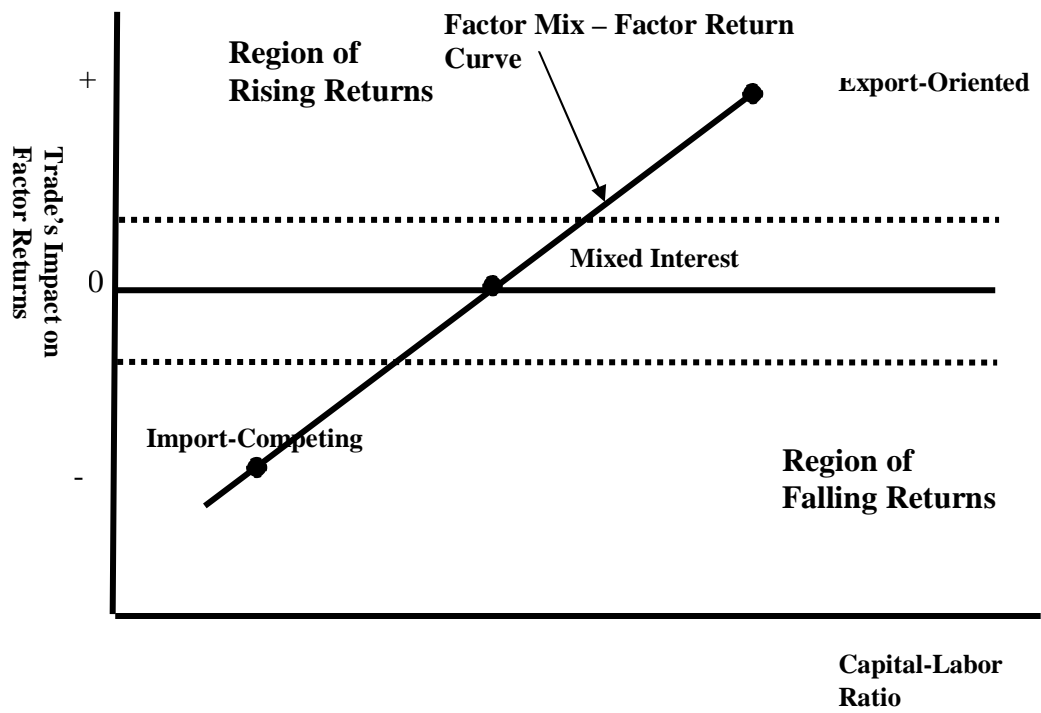


Figure 2: Capital-Labor Ratio and Trade's Impact on Factor Returns

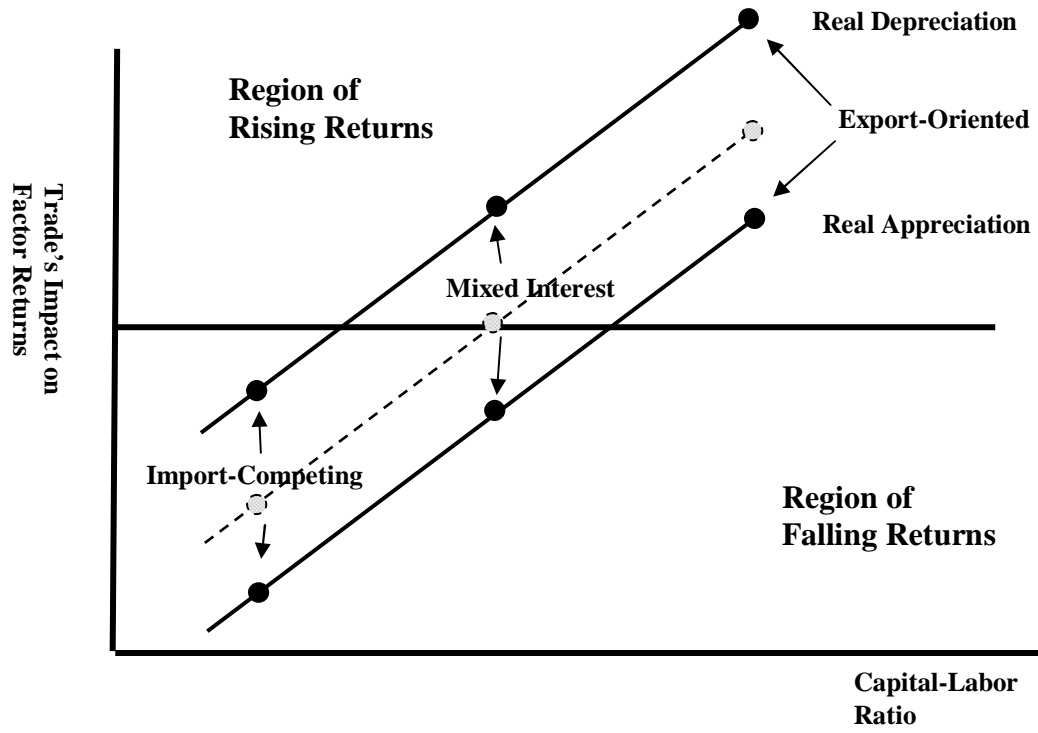


Figure 3: Exchange Rate Movements and the Return from Trade

	Antidumping Petitions			Safeguard Petitions		
Exchange Rate	4.43*** (0.57)	4.38*** (0.55)	4.09*** (0.62)	4.68*** (0.48)	4.17*** (0.46)	5.52*** (0.56)
GDP Growth	0.01 (0.03)			0.14*** (0.03)		
Unemployment		-0.03 (0.02)			0.03* (0.02)	
Capacity Utilization			1.52 (1.57)			-6.64*** (1.46)
Import Growth	0.03*** (0.01)	0.03*** (0.00)	0.04*** (0.01)	-0.01 (0.01)	0.02*** (0.00)	-0.01 (0.01)
1992 Election	1.15*** (0.13)	1.13*** (0.12)	1.12*** (0.12)	1.22*** (0.11)	0.99*** (0.10)	1.05*** (0.10)
1988 Election	0.92*** (0.15)	0.90*** (0.15)	0.96*** (0.15)	0.17 (0.16)	0.20 (0.16)	0.07 (0.16)
President's Party	0.54*** (0.07)	0.56*** (0.07)	0.54*** (0.07)	0.48*** (0.06)	0.44*** (0.06)	0.46*** (0.06)
Constant	2.96*** (0.08)	3.17*** (0.14)	2.91*** (0.09)	3.30*** (0.08)	3.33*** (0.11)	3.76*** (0.08)
Observations	30	30	30	25	25	25
R-squared	.45	.45	.45	.38	.36	.38
Log Likelihood	-162.32	-161.07	-161.92	-222.24	-231.36	-222.65

* p<.1, ** p<.05, *** p<.01 Standard errors in parantheses

Data Appendix

Summary Statistics					
Variable	Obs	Mean	Std. Dev.	Min	Max
Dumping	30	39.6333	24.1953	8	94
Safeguard	25	61.96	40.76199	14	178
Real Exchange Rate	30	0.00168	0.066057	-0.2	0.104
GDP Growth	30	2.94667	2.037871	-1.9	7.2
Capacity Utilization	30	0.00678	0.046284	-0.1	0.148
Unemployment	30	6.38333	1.42468	4	9.7
Change in Imports	30	6.34667	7.354554	-11	24.3

Year	Anti-Dumping	Safeguard	Real Exchange Rate	GDP Growth	Capacity Utilization	Unemployment	Change in Imports (%)
1975	8		-0.01338	-0.3	0.037915	5.6	-2.3
1976	11		-0.02442	-0.3	0.148299	8.5	-11.1
1977	15		0.005084	5.2	-0.0589	7.7	19.6
1978	16		-0.02679	4.5	-0.04988	7.1	10.9
1979	16		-0.07743	5.7	-0.02491	6.1	8.7
1980	21	100	0.016494	3.2	0.001188	5.8	1.7
1981	18	32	0.026791	-0.2	0.069886	7.1	-6.6
1982	69	178	0.104081	2.5	0.020752	7.6	2.6
1983	48	42	0.087752	-1.9	0.085916	9.7	-1.3
1984	49	80	0.02047	4.5	-0.0327	9.6	12.6
1985	87	120	0.068439	7.2	-0.07557	7.5	24.3
1986	70	89	0.032992	4.1	0.014049	7.2	6.5
1987	16	44	-0.18298	3.5	0	7	8.6
1988	64	48	-0.10532	3.4	-0.03333	6.2	5.9
1989	26	32	-0.05637	4.1	-0.03571	5.5	3.9
1990	39	25	0.051512	3.5	0.01083	5.3	4.4
1991	67	74	-0.03809	1.9	0.018382	5.6	3.6
1992	94	133	-0.01762	-0.2	0.042146	6.8	-0.6
1993	41	37	-0.0136	3.3	-0.01633	7.5	7
1994	51	70	0.039392	2.7	-0.00995	6.9	8.8
1995	14	20	-0.00405	4	-0.02899	6.1	11.9
1996	20	14	-0.04538	2.5	-0.00241	5.6	8
1997	16	29	0.06029	3.7	0.01467	5.4	8.7
1998	38	44	0.084487	4.5	-0.01446	4.9	13.6
1999	50	67	0.054197	4.2	0.015912	4.5	11.6
2000	49	36	-0.00243	4.5	0.011139	4.2	11.5
2001	75	116	0.067503	3.7	0.006227	4	13.1
2002	35	39	0.070979	0.8	0.083671	4.7	-2.7
2003	40	41	-0.0144	1.6	0.010914	5.8	3.4
2004	26	39	-0.1179	2.5	-0.00543	6	4.1

Data Sources: Dumping and Safeguards Petitions from USITC 2005;
Real exchange rate is the Major Currencies Index from Federal Reserve Bank available at http://www.federalreserve.gov/Releases/h10/summary/indexnc_m.txt
All other economic data from Economic Report of the President, 2006 available at <http://www.gpoaccess.gov/eop/download.html>

