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SOME SIMPLE ANALYTICS OF ANTIDUMPING ORDERS: BUREAUCRATIC DISCRETION AND RISK, ANTI-IMPORTER BIAS, AND THE BYRD AMENDMENT

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Abstract:

As anti-dumping statutes have been enacted in greater numbers around the globe, more bureaucracies have been set up to administer these laws. The associated procedures and practices tend to grant considerable discretion to officials, often providing leeway to substantially harm importing firms and their foreign suppliers. Moreover, in some jurisdictions it has been argued that the computation of foreign market values, dumping margins, and the like often bears no relation to the prices set by, or to the costs of, foreign firms. Using a standard linear version of the Bertrand duopoly model of competition, I analyse the incentives created by certain types of bureaucratic discretion, anti-importer bias in the administration of anti-dumping laws, and the effects of a controversial U.S. anti-dumping provision, the so-called Byrd Amendment. It is shown that the former two features provide sharp incentives to raise the price of import-competing goods, the latter feature creates a price-floor for the domestic firm, and that the interaction between these institutional features increases equilibrium prices substantially above free trade prices.

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1. Introduction

As tariffs on manufactured products have fallen with successive rounds of multilateral trade negotiations and the signing of dozens of preferential trade agreements, economic analyses of remaining non-tariff barriers have grown in number (Baldwin 1970; Laird and Yeats 1990; Deardorff and Stern 1998). Anti-dumping statutes and tariffs have featured prominently in this research programme, not least because of the spread of such laws since their introduction one hundred years ago, and over the past twenty years in particular (see, for example, the surveys of the relevant literature in Finger 1993; Blonigen and Prusa 2001.)[2] Moreover, legal practitioners and political scientists have begun to shed light on the non-market-related determinants of the design and operation of anti-dumping laws and on what might be termed the supply and demand for anti-dumping protection (Boltuck and Litan 1991; Jackson and Vermulst 1990; Nivola 1993; Finger, Hall, and Nelson 1982.) This relatively restrained scholarly literature has been augmented by blistering critiques and defenses of anti-dumping in the print media, at international fora, and elsewhere (see, for example, Bovard 1991; Mastel 1998; Eckes 1995, and just about any open editorial on anti-dumping on the pages of the *Wall Street Journal*.)

An important feature of the implementation of anti-dumping laws is that there is considerable room for discretion by administering officials (see, for example, Clarida 1995; Blonigen 2003; and the contributions to Boltuck and Litan 1991). Sometimes this discretion can be exercised in a manner that results in the calculation of foreign market values, dumping margins, and the like that have little or no bearing to the underlying

[2] The spread of anti-dumping laws and enforcement has been recently documented and discussed in Prusa (2004).

legal rationales for the anti-dumping statutes, namely deterring certain types of international price discrimination and foreign market sales below average total costs.[3] This is not to suggest that officials are breaking the law, rather that they may be using the discretion available to them to respond to incentives to supply protection to influential domestic interests and constituencies. Indeed when the latter are especially aggressive in pressing their case, the weight given to any information supplied by a foreign firm or to the underlying legal concepts that motivate the anti-dumping law may come a poor second and third to the bureaucratic imperative to supply protection. Forward-looking foreign firms may thus want to anticipate the effects of such bureaucratic discretion and temper any expectations as to the likelihood that prices changes on their part may reduce, for example, the likelihood of anti-dumping order being imposed.

This paper focuses on one area where bureaucratic discretion can be very important, namely the calculation of the foreign market value that import prices will be subsequently be compared to after an anti-dumping order is put in place. Although many nations' anti-dumping laws allow for the imposition of provisional ad-valorem duties to be levied once an order is imposed, the final amount of the duty typically depends on any (non-negative) difference between the implementing agency's estimate of the foreign market value and the prices charged on each import transaction. Using a standard linear Bertrand duopoly model with differentiated products, I show how a foreign firm and its domestic rival might respond to the incentives created by various types of what I term

[3] In this regard, the conclusion of one study is worth repeating in full: "Here we offer a detailed, step-by-step guide to how dumping is defined and measured under current rules. In addition, we identify the many methodological quirks and biases that allow normal, healthy competition to be stigmatized as "unfair" and punished with often cripplingly high antidumping duties. The inescapable conclusion that follows from this analysis is that the antidumping law, as it currently stands, has nothing to do with maintaining a "level playing field." Instead, antidumping's primary function is to provide an elaborate excuse for old-fashioned protectionism" (Lindsey and Ikenson 2002).

pure bureaucratic discretion. By the latter, I mean that the agency sets the foreign market value used for computing the amount of duties owed in a way that is completely independent of (or unrelated to) the foreign firm's pricing behaviour or cost levels. (Rather than thinking of the enforcement agency as completely ignoring the either "home market" price of the foreign firm or the latter's average costs, one might consider that the enforcement agency uses whatever legal provisions that it has at its disposal to evaluate data provided by the foreign firm in such a way that validates a pre-conceived foreign market value. Therefore, pure discretion can be associated with the appearance of foreign-supplied information being taken into account.) Furthermore, rather than specify the process by which the enforcement agency chooses the foreign market value, I show for every foreign market value that exceeds the foreign firm's free trade equilibrium price how such discretion alters that firm's reaction function. Pure discretion is shown to have a non-negative effect on the prices charged by foreign firm (compared to the respective best response function under free trade[4]) and that, over a finite range of the domestic firm's prices, the best response of the foreign firm is to set a price equal to the foreign market value; that is, the foreign firm raises its prices above its (free trade) best response just enough to eliminate the dumping margin. The resulting kinked best response function creates two types of equilibrium market outcome under the antidumping order.

The next step in my analysis was to introduce a Byrd Amendment-like provision, whereby the domestic firm is given all of the dumping duties that are paid by the foreign firm. This provision has the effect of creating an additional incentive for the domestic firm to its raise price as doing so increases the sales of foreign firm, thereby increasing

[4] Throughout this paper the market outcomes under an anti-dumping order are compared to those where no such order prevails. The latter are referred to as the market equilibrium outcomes under free trade.

the dumping duties paid. I show that the Byrd Amendment provision effectively introduces a price floor into the domestic firm's best response function, although this finding is due to the symmetric nature of the own price-responsiveness of the linear demand functions assumed for the domestic and foreign firms.[5] I also show that where the Byrd Amendment raises prices in equilibrium (compared to the case where there is no Byrd Amendment provision), a seemingly paradoxical result arises; namely, that the foreign firm is better off. This latter finding occurs because the foreign firm's profit margin rises for two reasons: the excess of price over marginal costs increases and the amount of dumping duties paid per unit falls as the foreign firm's price increases.

In the third model that I solve I return to the case where there is no Byrd Amendment. However, I introduce uncertainty over the level of the foreign market value that the enforcement agency uses to calculate the actual level of dumping duties. I consider the case where the agency sets the foreign market value after the firms have chosen their prices. (The agency can be thought of as conducting an *ex-post* review of the foreign firm's pricing decisions to establish the amount of duties, if any, to be collected.) Specifically, I assume that the agency sets one of two possible levels of the foreign market value and that the duopolists do not know which level will prevail at the time they make their pricing decisions. Two parameters are introduced with this uncertainty: the probability that the high level of the foreign market value is used to compute any dumping duties and the ratio of the higher to the lower level of the foreign market value.

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[5] This finding highlights a dilemma faced when modeling the effects of the Byrd Amendment in a Bertrand duopoly with differentiated products and linear demand curves. Under this symmetric assumption some rather stark results emerge. But what asymmetric assumption (on the own-price responsiveness of demand) is reasonable or, at least, defensible? For example, what confidence do we have that the price responsiveness of import demand is greater (say) than in the comparable demand function for domestically-produced good? In the section on this particular model it is suggested that the price-floor results from what can be thought of as a limiting case when the proportion of the collected dumping duties paid to the domestic firm equals one.

Higher levels of either parameter can be interpreted as greater bias against the importing firm.[6] In such a model I show that a further kink is introduced into the foreign firm's reaction function and that, perhaps as expected, greater anti-importer bias results in the foreign firm setting a higher price in equilibrium.

The last model presented in this paper combines the uncertainty over the bureaucratic discretion (over the level of the foreign market value) described in the last paragraph with the Byrd Amendment. I show that together these provisions result in equilibrium import prices that must exceed the lower of the two possible levels of the foreign market value and that can, under certain circumstances, reach the higher foreign market value. The Byrd Amendment continues to provide a price floor for the domestic firm equal now to the latter's best response to the expected value of the foreign market value, reinforcing the point that this statutory provision does more than merely transfer duties from the government's treasury to the domestic firm. Compared to the no-uncertainty case, the incentive of the foreign firm to raise prices so as to reduce dumping duties is strengthened. Given the strategic complementarities in the Bertrand duopoly model, both firms' incentives to raise price are reinforced in equilibrium by the other's intention to do so. The consequences of reducing anti-importer bias and of abolishing the Byrd Amendment can also be traced through this model.

In summary, the goal of this paper has been to examine the effects on price setting and market outcomes of certain features of anti-dumping laws and their implementation, that latter of which create the scope for bureaucratic discretion. Moreover, I have sought

[6] J. Michael Finger, among others, have referred to the U.S. Department of Commerce as a "hanging jury" in respect to their conduct of less-than-fair-value determinations and the calculation of dumping margins. Consistent with this claim Blonigen (2003) has shown that the estimated dumping margins have grown over time. Higher values of the parameters of the stochastic process determining the foreign market value in this model can be thought of stacking the jury further against a foreign firm.

to show how these features interact in interesting ways. I do not claim that every relevant aspect of such discretion has been modelled, nor have I characterised the decision-making process by which such discretion is exercised. This is because focus is inevitable in modelling strategy and, with respect to the latter caveat, I do not want to be tied to any particular political economy model of how bureaucratic discretion is exercised. Instead, I draw out the implications for price setting by forward-looking firms of a wide range of bureaucratic outcomes, uncertainty over those outcomes, and the Byrd Amendment. Such models of pure bureaucratic discretion may provide a useful benchmark against which to compare the findings of theoretical approaches that assume the implementation of anti-dumping orders faithfully takes into account the prices set by foreign firms at home and abroad and those firms' average cost levels. Indeed, it would be useful to compare the theoretical predictions of both types of model to see if empirical tests could be devised for samples of observed pricing behaviour under anti-dumping orders.

The next section of this paper introduces some basic notation and the recounts the structure of the Bertrand duopoly with differentiated products. The third through seventh sections presents the four models described in this introduction. Concluding remarks follow. THESE SECTIONS WILL BE DISTRIBUTED AT THE CONFERENCE.

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