

A RATIONALE FOR QUOTA PROTECTION: A POLITICAL ECONOMY APPROACH

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INTRODUCTION

The equivalence between tariffs and quotas under perfect competition is one of the most fundamental results in international trade theory. This result states that under competitive market conditions, if a tariff is replaced by a quota such that the import levels associated with both are the same, then the real outcome will be identical, i.e., there will be no difference in the price and quantity consumed and domestically supplied.¹

Starting from Bhagwati [1965], however, economists recognize that the extent of anticompetitive effects can differ across the two instruments when alternative market structures are assumed. More specifically, Bhagwati [1965] demonstrates that import quotas can be more protective than the tariffs that induce the same level of imports when the domestic producer is a monopolist. The reason is that quotas deprive domestic consumers of the possibility of substitution towards imported goods and thus insulate the domestic producer from competitive pressure. The nonequivalence result, since then, has been extended to many other settings including the case of duopoly [Krishna, 1989; Hwang and Mai, 1988], the presence of uncertainty [Falvey and Lloyd, 1986], and the possibility of implicit collusion [Rotemberg and Saloner, 1989].

Magee [1988] provides a new perspective on the choice of the means of protection between quotas and tariffs. Noting that politics is largely responsible for protectionism, Magee proposes a so-called "principle of optimal obfuscation."² According to this principle, *ceteris paribus*, politicians will choose an instrument of protection that is less transparent to the losers from protection in order to minimize the political cost of displeasing the losers. This explains why a quota can be a preferred means of protection despite the availability of more efficient means of protection such as a tariff; quotas are less transparent than tariffs in that tariffs provide an explicit measure of the increase in the domestic price over the world price due to protection.

Cassing and Hillman [1985], in contrast, construct a political model of endogenous protection in which the policymakers' objective is assumed to be the maximization of political support. In contrast to Magee [1988], they show that a tariff is chosen over a quota as the means of protection. This is due to the fact that tariffs generate more profits and hence, more political support from the protected industry than quotas when both instruments lead to the same domestic price.³

In this paper, I synthesize these two political economy approaches to provide a rationale for quota protection in declining industries.

POLITICAL SUPPORT MAXIMIZATION

Consider a Ricardo-Viner type specific factors model of international trade in which owners of the factor specific to the import-competing sector lobby for protection while owners of other factors oppose protection. Adopting the Stigler-Peltzman assumption employed in the context of regulation, let me specify a political support function which depends on the welfare levels of the two competing groups, which in turn, depend on the level of the regulated domestic industry price [Stigler, 1971; Peltzman, 1976]. More precisely, the government maximizes the following Stigler-Peltzman political support function (SPPSF):⁴

$$(1) \quad \Sigma(P) = M(\Pi(P), P),$$

where P is the domestic price in the import competing industry and $\Pi(P)$ is the corresponding industry profits. Higher industry profits elicit greater political support from the owners of the factor specific to the industry. Consumers, however, are antagonized by higher prices; $M_{\Pi} > 0$ and $M_P < 0$. Further assume that $\Pi_P > 0$, $\Pi_{PP} < 0$, $M_{III} < 0$ and $M_{PP} < 0$ in the relevant range.⁵

Let P^* and T denote the world price and the specific tariff, respectively. Then, I have

$$(2) \quad P = P^* + T.$$

Let me define

$$(3) \quad P^{\circ} = \operatorname{argmax} M(\Pi(P), P).$$

Then, the government sets the domestic price to be equal to P° by using trade policy instruments, i.e.,

$$(4) \quad P^{\circ} = P^* + T.$$

This implies that the tariff is adjusted to exactly offset any changes in the world price to ensure that the static political support-maximizing price P° always prevails in the domestic market, i.e.,

$$(5) \quad dT = -dP^*.$$

The implication of this setup is that the industry's domestic price is invariant to import price changes because the political support-seeking policymaker will always ensure that the domestic price is maintained at the level where the political support function is maximized. This can be done with either a tariff or a quota.⁶

RATIONALE FOR QUOTA PROTECTION

The optimal price dynamics generated by the SPPSF may explain the choice of a quota over a tariff as a favorite instrument to achieve the same level of protection. Note that the equilibrium values of the domestic price and quantity consumed and the level of imports with a tariff can be replicated by an equivalent quota. In the face of a declining import price, however, a quota may have a political advantage over a tariff in that the level of the quota, once it is implemented, does not need to change until the world price level reaches the critical value [Choi, 1995]. A tariff, however, requires constant readjustment in order to sustain the same static political-support-maximizing price P° .⁷ This is because the tariff has to counterbalance any changes in the world price to keep the level of imports constant and sustain the static political support maximizing price.

Consider the transparency explanation for the choice of instrument proposed by Magee [1988]. According to Magee, the choice of instrument is governed by the "principle of optimal obfuscation" which induces policymakers to opt for a less transparent means of income transfers to mitigate political backlash from the adversely affected groups. It is often argued that a quota is politically less costly due to the fact that the protective effect of a quantitative restriction is less transparent to the losers from protectionist policies than a tariff which provides an explicit expression of the increase in the domestic price over the world price. The asymmetry in the transparency of protection would be more conspicuous when the world price continues to fall. This is because the constant readjustment in the tariff to offset any fall in the world price is likely to expose the government to the criticism of "capture" by the protected industry and may prove to be politically more costly than the equivalent quota. Even though both instruments provide the same level of protection, the political support-maximizing level of tariff is ever increasing and makes it clear that protection is heightened in the face of a declining world price. Quota protection, in contrast, gives the impression that the level of protection is invariant over time. Therefore, quota protection will tend to alienate the consumer group less than the equivalent tariff protection and be more appealing to policymakers.

NOTES

1. With the proviso that the revenue would accrue to the government in the case of the tariff whereas rents from quota would accrue to those receiving the import quotas in the absence of quota auctions.
2. See Hillman [1989] for an excellent survey on the political economy of protection.
3. When the policymaker also craves revenues generated by tariffs or quotas, the choice of instrument for protection is no more clear-cut and will depend on the relative importance between political support and revenue income for the policymaker.
4. Based on Bernheim-Whinston's [1986] menu auction framework, Grossman and Helpman [1994] provide microfoundations for the reduced-form political-support function.
5. To facilitate comparison, I follow closely the notation used by Hillman [1982].
6. Based on equation (5), Hillman [1982] concludes that the SPPSF renders permanent protection to the declining industry. To escape the conclusion of a static domestic price and to derive more interesting price dynamics in the face of intensifying import competition, Hillman amends the SPPSF by assuming that political support rather depends on the *divergence* of welfare levels from their anar-

chistic free-trade counterparts rather than on the welfare *levels per se*. In other words, political support is responsive only to "gains and losses due to the authorities' acting to cause the domestic price to deviate from the world price via tariff intervention"; economic agents blame or credit the government on their welfare changes *only if* they are caused by government intervention. By resorting to this alternative assumption, Hillman derives price dynamics in which declines in the world price lead to corresponding declines in the domestic price. Therefore, if the world price continues to decline, protection will not be sufficient to sustain a domestic price above the break-even point for the domestic producers and import competition eventually induces them to exit. In Choi [1995], however, I argue that the government may provide only temporary protection to the declining industry *even with* the Stigler-Peltzman type political-support function if the world price continues to decline. As a result, I establish that Hillman's main conclusion of temporary protection is robust to alternative specifications of the political support function. See Choi [1995] for more details.

7. Choi [1995], shows that policymakers provide protection only to a critical value of the world price. If the world price is below this critical level, protection is too costly for the policymakers and the economy is liberalized.

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