

Lobbying for a Common External Tariff from Inside and Out*

By

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Abstract

We consider the interactions between domestic lobbying and two types of cross-border lobbying in a Customs Union (CU). The two types of cross-border lobbying are (i) lobbying from firms in one CU country to the governments of other CU countries, and (ii) that from firms outside the CU. We focus on the determination of the common external tariff (CET) in a two-stage game-theoretic model. When firms within the CU cooperate in lobbying, a sufficient condition for the CET to be higher compared to the noncooperative case is that the CU firms' lobbying is a strategic substitute for the lobbying done by the non-union firms. Furthermore, the same strategic substitutability condition is sufficient to ensure that the CET must rise, when stricter regulations are imposed on lobbying from outside the CU.

Keywords: Free Trade Area, Customs Union, Preferential Trading Agreements, Domestic lobbying, Cross-border lobbying, External tariffs.

JEL Classification: F13

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* The views expressed are those of the authors and do not necessarily represent official positions of the Federal Reserve Bank of St. Louis or of the Federal Reserve System. The authors are grateful to the discussant Stephen Chaudoin at the 2012 Annual Meeting of the Southern Economic Association for helpful comments and suggestions.

1 Introduction

While the role of lobbying in influencing trade policy has been thoroughly researched, the effect of lobbying by foreign firms on domestic tariffs – the phenomenon of cross-border lobbying – has not received the amount of attention it deserves. Some recent papers have focused on this issue, but they do not capture some of the important characteristics of cross-border lobbying, particularly in the context of trading blocs. For example, consider the European Union (EU).¹ The EU tariff is common for all member nations and set on goods imported from outside the EU, while maintaining free trade within the bloc. In the trade literature, a union like this is referred to as a Customs Union (CU).² The political economy of trade policy in a CU has to take into account a number of distinctive factors.

First, one has to distinguish between the cross-border lobbying from within a CU — lobbying by firms in one member country to the government of another member country — and lobbying from firms outside the CU to the governments of the CU member countries. In addition, lobbying done by non-CU firms have to focus on the multiple governments who are members of the CU. Second, integration of the economies in a CU may also lead to integration of lobby groups across borders in a CU. Schiff and Winters (2003) provide an excellent discussion of these issues relating to cross-border lobbying in the EU. Indeed, cross-border lobbying is widely observed in the EU, where organizations such as Eurocommerce, EuroBio (European Association for Bio-industries), and Friends of Europe are extremely active in EU-wide lobbying. It is to be noted that there are restrictions on lobbying, particularly lobbying in the form of campaign contributions. Moreover, the restrictions are much stricter

¹Although the context for North America Free Trade Area (NAFTA) is different, the incidence of cross-border lobbying is also well documented for these nations. For example, in the US case, data on lobbying firms, amount spent, and their clients are available in www.opensecret.org. Gawande et al. (2006) finds that foreign lobbies influence U.S. tariffs, while Stoyanov (2009) finds significant impact of foreign lobbying on Canadian trade policy. Attesting to such influence, a lobby firm in the U.S.A. writes on its website, “Holland & Knight’s International Trade Group represents the interests of ... foreign industries before the agencies of the United States Government, ...” (www.hklaw.com/id16048/mpgid4844/).

²See, for example, Viner, 1950; Riezman, 1979; Gatsios and Karp, 1995.

for cross-border lobbying than for domestic ones. In some countries there is a complete ban on campaign contributions from foreign firms. However, it is very difficult to legislate against such lobbying, and these go on via loopholes and exceptions in the law.

Different types of cross-border lobby groups have different objectives. Firms in a CU country have the incentive to lobby for a higher common external tariff (CET) that protects the market of the CU from competition from non-CU firms. These extra-union firms, on the other hand, have the incentive to lobby the CU to reduce the CET, so that they can compete more effectively. These countervailing incentives affect the CET in complicated ways.

In order to capture the above realities, we consider three types of lobbying in our model. First, we have the standard domestic lobbying, where firms in a member nation lobby its own government, which can influence the CET. Second, we have the two types of cross-border lobbying discussed above.

The main purpose of this paper is to unravel the interdependence between these three types of lobbying, and their effect on the CET. In addition, we examine how cooperation between lobby groups inside the CU affects the levels of the three types of lobbying, and, in turn, how the CET is affected. Finally, we analyze how restrictions on foreign lobbying affects the CET. As is well known, there are many ways of modeling lobbying.³ We adapt the campaign or political contributions approach. As will be clear later, our adaptation simplifies the equilibrium considerably. The model uses a two-stage game, where, in the first stage, the lobby groups decide on the levels of lobbying, and in the second stage external tariffs are determined.

³There are many alternative approaches to modeling lobbying activities including the directly unproductive rent-seeking activities (DUPs) approach (Bhagwati, 1982), the tariff-formation function approach (Findlay and Wellisz, 1982), the political support function approach (Hillman, 1982), median voter approach (Mayer, 1984), the campaign contribution approach (Magee et al., 1989), and the political contributions approach (Grossman and Helpman, 1994). For an analysis of lobbying in the specific context of free trade agreements, see, for example, Grossman and Helpman, 1995; Panagariya and Findlay, 1996.

2 The Model

For simplicity, we consider a CU with two members, labeled A and B . The rest of the world is labeled C . There is one non-numeraire good – we shall call this good “CU-importable” – that is imported from C by A and B and subject to a CET t , decided by the CU jointly. This decision is influenced by lobbying from the producers of this good in A , B and C .

Domestic producers of the CU-importable in country i ($i = A, B$) spend a total amount of h_i on lobbying both governments. Consumers’ surplus, domestic profits plus tariff revenue, in country i is affected by the level of CET t ; we denote it by $S_i(t)$ with $S_i'' < 0$. We assume that country i ’s government cares about not only social welfare, given by $S_i(t) - h_i$, but also about the amount of political contributions it receives.

Net profits of producers from countries A and B are given by $\pi^i(t) - h_i$ where $\pi^i(t)$ satisfied $\pi_t^A > 0$, $\pi_t^B > 0$, $\pi_t^C < 0$, and $\pi_{tt}^i \geq 0$ ($i = A, B, C$).

Having introduced most of the important variables and functions, we proceed to the solution of the optimal level of CETs. We consider a two-stage game. In stage one, producers in the three countries decide on their lobbying levels by maximizing their profits. In stage 2, the CU authority decides on the level of CET by maximizing a weighted sum of the two governments’ objective functions. To obtain a sub-game perfect equilibrium we work with backward induction. We now describe the two stages, starting with the second stage.

Let h_{ij} ($i = A, B, C; j = A, B$) be the proportion of profits that is spent on lobbying by firms in country i on the government of country j . That is, $h_{AA}\pi^A$ and $h_{BB}\pi^B$ are domestic lobbying levels and $h_{AB}\pi^A$, $h_{BA}\pi^B$, $h_{CA}\pi^C$, and $h_{CB}\pi^C$, are the levels of cross-border lobbying. In the traditional campaign contribution approach to lobbying *a la* Grossman and Helpman (1994), contributions are lump-sum transfers and there are contribution schedules. However, one needs to impose the refinement of local truthfulness of the equilibrium. By

specifying contributions in the forms of proportions of profits, we are kind of imposing truthfulness directly and bypassing a lot of the theoretical complications. Net profits (of the firm in country i) are given by

$$\tilde{\pi}^i = (1 - h_{iA} - h_{iB})\pi^i(t), \quad i = A, B, C. \quad (1)$$

We assume the existence of some adjustment costs associated with cross-border lobbying, possibly related to legal restrictions on foreign contributions to political funds. As a result, only a part of the amount spent on cross-border lobbying is actually received by the target of the lobbying as political contributions. Since restrictions on cross-border lobbying differ between those coming from within CU (i.e., from other member countries) and those coming from outside the CU, we assume these costs to be different. The total amount of foreign funds received the two governments are $f_{BA}(h_{BA}\pi^B)$ and $\rho^A f_{CA}(h_{CA}\pi^C)$ for country A , and $f_{AB}(h_{AB}\pi^A)$ and $\rho^B f_{CB}(h_{CB}\pi^C)$ for country B , where the f -functions are assumed to be increasing and concave. The parameters ρ^A and ρ^B represent the degree of regulation on lobbying from outside the CU in countries A and B respectively. A decrease in ρ represents an increase in regulation.

These assumptions are formally stated as

Assumption 1 $S_j'' < 0$, $\pi_t^A(t) > 0$, $\pi_t^B(t) > 0$, $\pi_t^C(t) < 0$, $\pi_{tt}^j(t) \geq 0$, $f'_{ij} > 0$, and $f''_{ij} < 0$ ($i = A, B, C$, $j = A, B$, $i \neq j$).

The objective functions of the two CU member governments and the CU authority are

$$G^A = S^A(t) - (h_{AA} + h_{AB})\pi^A + \rho^{AA}h_{AA}\pi^A + f_{BA}(h_{BA}\pi^B) + \rho^A f_{CA}(h_{CA}\pi^C), \quad (2)$$

$$G^B = S^B(t) - (h_{BA} + h_{BB})\pi^B + \rho^{BB}h_{BB}\pi^B + f_{AB}(h_{AB}\pi^A) + \rho^B f_{CB}(h_{CB}\pi^C), \quad (3)$$

$$G^{CU} = \alpha G^A + (1 - \alpha)G^B. \quad (4)$$

In stage 2 of the game, the CU authority maximizes G^{CU} with respect to t , giving rise to the first-order condition $\partial G^{CU}/\partial t = 0$ as:

$$\begin{aligned} & \alpha S_t^A + (1 - \alpha)S_t^B - \alpha(h_{AA} + h_{AB})\pi_t^A + \alpha\rho^{AA}h_{AA}\pi_t^A + \alpha f'_{BA}h_{BA}\pi_t^B + (1 - \alpha)\rho^B f'_{CB}h_{CB}\pi_t^C \\ & + \alpha\rho^A f'_{CA}h_{CA}\pi_t^C - (1 - \alpha)(h_{BA} + h_{BB})\pi_t^B + (1 - \alpha)\rho^{BB}h_{BB}\pi_t^B + (1 - \alpha)f'_{AB}h_{AB}\pi_t^A = 0. \end{aligned} \quad (5)$$

This simply states that the weighted average of the net marginal benefits of the two member countries is zero. In particular, the sixth and the seventh terms in (5) represent marginal costs of reduced contributions from country C because of an increase in the CET.

From (5), we find

$$\frac{\partial t}{\partial h_{AA}} = -\frac{\alpha\pi_t^A(\rho^{AA} - 1)}{\Delta_1}, \quad \frac{\partial t}{\partial h_{BB}} = -\frac{(1 - \alpha)\pi_t^B(\rho^{BB} - 1)}{\Delta_1}, \quad (6)$$

$$\frac{\partial t}{\partial h_{BA}} = -\frac{-(1 - \alpha)\pi_t^B + \alpha\pi_t^B [f'_{BA} + h_{BA}\pi_t^B f''_{BA}]}{\Delta_1}, \quad (7)$$

$$\frac{\partial t}{\partial h_{AB}} = -\frac{-\alpha\pi_t^A + (1 - \alpha)\pi_t^A [f'_{AB} + h_{AB}\pi_t^A f''_{AB}]}{\Delta_1}, \quad (8)$$

$$\frac{\partial t}{\partial h_{CA}} = -\frac{\alpha\rho^A\pi_t^C [f'_{CA} + h_{CA}\pi_t^C f''_{CA}]}{\Delta_1}, \quad \frac{\partial t}{\partial \rho^A} = -\frac{\alpha f'_{CA}h_{CA}\pi_t^C}{\Delta_1}, \quad (9)$$

$$\frac{\partial t}{\partial h_{CB}} = -\frac{(1 - \alpha)\rho^B\pi_t^C [f'_{CB} + h_{CB}\pi_t^C f''_{CB}]}{\Delta_1}, \quad \frac{\partial t}{\partial \rho^B} = -\frac{(1 - \alpha)f'_{CB}h_{CB}\pi_t^C}{\Delta_1}, \quad \text{where} \quad (10)$$

$$\begin{aligned} \Delta_1 = & \alpha S_{tt}^A + (1 - \alpha)S_{tt}^B - \alpha(h_{AA} + h_{AB})\pi_{tt}^A + \alpha\rho^{AA}h_{AA}\pi_{tt}^A + \alpha f'_{BA}h_{BA}\pi_{tt}^B + \alpha\rho^A h_{CA}f'_{CA}\pi_{tt}^C \\ & + \alpha f''_{BA} [h_{BA}\pi_t^B]^2 + \alpha\rho^A [h_{CA}\pi_t^C]^2 f''_{CA} - (1 - \alpha)(h_{BA} + h_{BB})\pi_{tt}^B + (1 - \alpha)\rho^{BB}h_{BB}\pi_{tt}^B \\ & + (1 - \alpha)f'_{AB}h_{AB}\pi_{tt}^A + (1 - \alpha)f''_{AB} [h_{AB}\pi_t^A]^2 + (1 - \alpha)\rho^B f'_{CB}h_{CB}\pi_{tt}^C + (1 - \alpha)\rho^B f''_{CB} [h_{CB}\pi_t^C]^2, \end{aligned}$$

and the second-order condition of the CU authority's optimization problem gives $\Delta_1 < 0$.

Intuitively, the firms in the CU member countries lobby for an increase in the CET, and the firms from outside the CU lobby in the opposite direction. From (6)-(10), we find that for domestic lobbying in country i to have its desired effect, one must have $\rho^{ii} > 1$ ($i = A, B$).⁴

⁴Similar assumption is also made in Grossman and Helpman (1994).

Otherwise, an increase in lobbying will reduce the marginal benefit of increasing the CET for the CU authority, reducing the optimal level of the CET. Since cross-border lobbying are subject to adjustment costs, the effectiveness of such lobbying depends on the shape of the f -functions. For within-CU cross-border lobbying, say from Country A to B to be effective, a *necessary* condition is that $f'_{AB} + h_{AB}\pi^A f''_{AB} > 0$. Since the CU authority does not take into account the direct cost of lobbying from firms outside the CU, a similar condition is both *necessary* and *sufficient*, i.e., for lobbying from outside the CU, say from country C to country A , to be effective a necessary and sufficient condition is that $f'_{CA} + h_{CA}\pi^C f''_{CA} > 0$.

An increase in restrictions against lobbying from outside the CU, i.e., a reduction in either ρ^A or ρ^B , reduces the marginal costs of increasing the CET by reducing contributions from country C and therefore increases the CET.

To determine the levels of lobbying, we consider two scenarios. In the first, all three lobby groups lobby non-cooperatively. In the second, the two lobby groups within the CU lobby cooperatively. These two cases are taken up in the following subsections.

2.1 Non-cooperative lobbying

In the case of non-cooperative lobbying, each lobby group (firm) maximizes its profits given by (1) with respect to its lobbying levels to the two CU-country government, taking into account their effects on the CET as given by (5).

$$\frac{\partial \tilde{\pi}^A}{\partial h_{Ai}} = (1 - h_{AA} - h_{AB})\pi_t^A \cdot \frac{\partial t}{\partial h_{Ai}} - \pi^A = 0, \quad (i = A, B), \quad (11)$$

$$\frac{\partial \tilde{\pi}^B}{\partial h_{Bi}} = (1 - h_{BB} - h_{BA})\pi_t^B \cdot \frac{\partial t}{\partial h_{Bi}} - \pi^B = 0, \quad (i = A, B), \quad (12)$$

$$\frac{\partial \tilde{\pi}^C}{\partial h_{Ci}} = (1 - h_{CA} - h_{CB})\pi_t^C \cdot \frac{\partial t}{\partial h_{Ci}} - \pi^C = 0, \quad (i = A, B), \quad (13)$$

The second terms in (11)-(13) represent the marginal costs of lobbying and the first terms give the marginal benefit via an induced change in the level of CET. Clearly, a necessary condition for the equilibrium lobbying level to be positive is that lobbying has the necessary effect on the CET from each lobby group's point of view. From this and the observations made after (6)-(10), we derive the following property of the equilibrium levels of lobbying.

Lemma 1 *A necessary condition for domestic lobbying in country i to be positive is that $\rho^{ii} > 1$ ($i = A, B$). As for cross border lobbying, a necessary condition for the equilibrium level of lobbying from country i to country j to be effective is that $f'_{ij} + h_{ij}\pi^i f''_{ij} > 0$ ($i = A, B, C, j = A, B, j \neq i$).*

Henceforth, we shall assume these necessary conditions to hold. Before moving to the next stage of our analysis, we shall now discuss the issue of strategic substitutability/complementarity between domestic and foreign lobbying, as this will be important for the results later on.

2.2 Strategic substitutability/complementarity

In this subsection, we shall examine the nature of strategic relationship between intra-CU and extra-CU lobbying. In particular, we want to examine if lobbying by the two groups are strategic substitutes or strategic complements. For illustration purposes, we shall consider lobbying by firms in countries A and C to the government in country A. As is well known, h_{AA} and h_{CA} are strategic substitutes (complements) if $\partial/\partial h_{AA} (\partial\tilde{\pi}^C/\partial h_{CA}) < 0$ (> 0).

From (18) we find

$$\begin{aligned} \frac{\partial}{\partial h_{AA}} \left(\frac{\partial\tilde{\pi}^C}{\partial h_{CA}} \right) &= \left[(1 - h_{CA} - h_{CB})\pi_{tt}^C \cdot \frac{\partial t}{\partial h_{CA}} - \pi_t^C + \frac{\pi^C \pi_{tt}^A}{\pi_t^A} - \frac{\pi^C Z}{\Delta_1 \frac{\partial t}{\partial h_{CA}}} \right] \frac{\partial t}{\partial h_{AA}} \\ &= \pi^C \left[\frac{\pi_{tt}^C}{\pi_t^C} - \frac{\pi_t^C}{\pi^C} + \frac{\pi_{tt}^A}{\pi_t^A} - \frac{Z}{\Delta_1 \frac{\partial t}{\partial h_{CA}}} \right] \frac{\partial t}{\partial h_{AA}}, \end{aligned} \quad (14)$$

where

$$\begin{aligned}
Z &= \alpha h_{BA}^2 \pi_{tt}^B f''_{BA} \pi_t^B \frac{\partial t}{\partial h_{CA}} + \alpha \rho^A \pi_{tt}^C \left[f'_{CA} + h_{CA} \pi^C f''_{CA} + h_{CA}^2 f''_{CA} \pi_t^C \frac{\partial t}{\partial h_{CA}} \right] \\
&+ 2\alpha \frac{\partial t}{\partial h_{CA}} \left[f''_{BA} h_{BA}^2 \pi_t^B \pi_{tt}^B + \rho^A h_{CA}^2 \pi_t^C f''_{CA} \pi_{tt}^C \right] + (1 - \alpha) \frac{\partial t}{\partial h_{CA}} \left[h_{AB}^2 \pi_{tt}^A f''_{AB} \pi_t^A + \rho^B h_{CB}^2 \pi_{tt}^C f''_{CB} \pi_t^C \right] \\
&+ 2(1 - \alpha) \frac{\partial t}{\partial h_{CA}} \left[f''_{AB} h_{AB}^2 \pi_t^A \pi_{tt}^A + \rho^B f''_{CB} h_{CB}^2 \pi_t^C \pi_{tt}^C \right] + 2\alpha \rho^A h_{CA} f''_{CA} (\pi_t^C)^2.
\end{aligned}$$

The right hand side of (14) can be either positive or negative. However, we also need to make sure that the condition for strategic substitutability/complementarity does not contradict second-order profit maximizing condition. It can be verified that

$$\frac{\partial}{\partial h_{CA}} \left(\frac{\partial \tilde{\pi}^C}{\partial h_{CA}} \right) < 0 \iff \frac{\pi_{tt}^C}{\pi_t^C} - \frac{\pi_t^c}{\pi^C} - \phi - Y > 0, \quad (15)$$

$$\text{where } \phi = \frac{Z}{2\Delta_1 \frac{\partial t}{\partial h_{CA}}}, \quad Y = \frac{\alpha \rho^A \pi_t^C f''_{CA} \left(\pi^C + h_{CA} \pi_t^C \frac{\partial t}{\partial h_{CA}} \right)}{\Delta_1 \left(\frac{\partial t}{\partial h_{CA}} \right)^2} < 0.$$

From Lemma 1 we know that $\partial t / \partial h_{AA} > 0$, and so from (14) we get:

$$\frac{\partial}{\partial h_{AA}} \left(\frac{\partial \tilde{\pi}^C}{\partial h_{CA}} \right) \lesseqgtr 0 \quad \text{according as } \frac{\pi_{tt}^C}{\pi_t^C} - \frac{\pi_t^C}{\pi^C} + \frac{\pi_{tt}^A}{\pi_t^A} - 2\phi \lesseqgtr 0. \quad (16)$$

We have already noted that $Y < 0$, and, if the intra-CU terms dominate in the expression for Z , from assumption 1 it follows that $Z > 0$. Moreover, from Lemma 1 we know that $\partial t / \partial h_{CA} < 0$ and stability of the equilibrium requires that $\Delta_1 < 0$. Thus, it is reasonable to assume that $\phi > 0$. With these, from (15) and (16), we derive the following lemma.

Lemma 2 *Lobbying by a firm in the member country A and that by a firm from the outside country C are strategic complements if*

$$\frac{\pi_{tt}^C}{\pi_t^C} - \frac{\pi_t^c}{\pi^C} - \phi - Y > 0, \quad \text{and} \quad \frac{\pi_{tt}^C}{\pi_t^C} - \frac{\pi_t^C}{\pi^C} + \frac{\pi_{tt}^A}{\pi_t^A} - 2\phi > 0,$$

and they are strategic substitutes if

$$\frac{\pi_{tt}^C}{\pi_t^C} - \frac{\pi_t^c}{\pi^C} - \phi - Y > 0 > \frac{\pi_{tt}^C}{\pi_t^C} - \frac{\pi_t^C}{\pi^C} + \frac{\pi_{tt}^A}{\pi_t^A} - 2\phi.$$

Clearly, both scenarios are possible. However, a higher value of ϕ and a lower value of π_{tt}^A/π_t^A makes the case of strategic substitutability more likely.

2.3 Cooperation among lobbyists within CU

When the lobby groups in the two CU member countries cooperate, they decide on their lobbying levels (domestic and cross-border) by maximizing their joint profits. The first-order conditions are:

$$\frac{\partial(\tilde{\pi}^A + \tilde{\pi}^B)}{\partial h_{ij}} = [(1 - h_{AA} - h_{AB})\pi_t^A + (1 - h_{BB} - h_{BA})\pi_t^B] \frac{\partial t}{\partial h_{ij}} - \pi^i = 0, \quad (i = j = A, B), \quad (17)$$

$$\frac{\partial \tilde{\pi}^C}{\partial h_{Ck}} = (1 - h_{CA} - h_{CB})\pi_t^C \cdot \frac{\partial t}{\partial h_{Ck}} - \pi^C = 0, \quad (k = A, B). \quad (18)$$

Once again, the second terms are the marginal costs of lobbying and the first terms give the marginal benefits via induced changes in the CET. Lemma 1 about the property of the equilibrium lobbying levels continues to hold.

Having described the equilibrium condition, we shall now turn to our analysis of the equilibrium. Since we consider six different lobbying levels and they are all endogenously determined along with the CET, the rigorous analysis is extremely messy and we shall try to avoid it. Instead, we shall try and identify the important and direct channels via which changes occur as it is very likely these effects will dominate any secondary indirect channels which may or may not work in the opposite direction than the direct effects.

For the firms in the CU member countries, it is easy to check that the magnitude of marginal benefits here are larger than when lobbying is non-cooperative. That is,

$$\begin{aligned} \left. \frac{\partial(\tilde{\pi}^A + \tilde{\pi}^B)}{\partial h_{Ai}} \right|_N &= [(1 - h_{BB} - h_{BA})\pi_t^B] \frac{\partial t}{\partial h_{Ai}} > 0, \quad (i = A, B), \\ \left. \frac{\partial(\tilde{\pi}^A + \tilde{\pi}^B)}{\partial h_{Bi}} \right|_N &= [(1 - h_{AA} - h_{AB})\pi_t^B] \frac{\partial t}{\partial h_{Bi}} > 0, \quad (i = A, B) \end{aligned}$$

where the subscript ‘ N ’ on the left-hand side indicate that the partial derivatives are evaluated at the non-cooperative equilibrium given in (11)-(13).

From the above four equations and the concavity of the profit functions (with respect to lobby levels), it follows that the proportion of profits allocated for lobbying by the intra- CU firms, *ceteris paribus*, is higher when they cooperate than when they do not. This is as one would expect. By maximizing joint profits, the firms are able to reduce Nash inefficiency in lobbying (from their private point of view) and make lobbying more effective. The first-order conditions for lobbying by the firm outside the CU do not change in the two cases. However, differences in the levels of lobbying the the firms within the CU between the cases will have an indirect effect on the level of lobbying by the firm outside the CU. Whether a higher level of lobbying by a CU member-country firm increases or reduces the level of lobbying by the outside firm would depend on whether the two firms are strategic complements or substitutes in lobbying. In Lemma 2 it has been shows that both situations are possible. In the second scenario in Lemma 2, i.e., when the two sets of firms are strategic substitutes, we get unambiguous results. To be more specific, when the firms in the CU and the firms outside of the CU are strategic substitutes in lobbying, it should follow from the above discussion that the levels of lobbying for the firms inside the CU are higher, and those outside lower, when the firms belonging to the member countries cooperatively lobby than when they do not. Since the firms outside the CU lobby for a lower CET, it follows that the equilibrium value of the CET is higher when the firms inside the CU cooperate in lobbying. Formally,

Proposition 1 *When the firms inside the Customs Union lobby cooperatively, the equilibrium level of the common external tariff is higher compared to the case when they do not cooperate if the firms inside the Customs Unions and those outside are strategic substitutes in lobbying.*

2.4 Regulation and lobbying

In this section, we shall examine the consequence of a tightening of the regulations against lobbying from outside the CU — represented by a reduction in ρ^A , ρ^B or both — on lobbying levels of firms within the CU, those outside the CU, and on the CET.

From (5), we find

$$dt = \sum_{i=A}^C \sum_{j=A}^B \frac{\partial t}{\partial h_{ij}} \cdot dh_{ij} - \frac{\alpha f'_{CA} h_{CA} \pi_t^C}{\Delta_1} \cdot d\rho^A - \frac{(1-\alpha) f'_{CB} h_{CB} \pi_t^C}{\Delta_1} \cdot d\rho^B. \quad (19)$$

The last two terms above give the direct effects. A reduction ρ^A , for example, reduces the cost of increasing the CET in terms of a reduction in contributions from the firms in country C. This reduction in marginal costs would increase the equilibrium level of the CET. The other terms give effects via induced changes in the levels of lobbying. Turning first to lobbying firms in country C and focusing on the direct channel, from (9), (10) and (13), we see that a reduction in ρ^A (or ρ^B) reduces the marginal benefit of lobbying for the firm in country C, and this would reduce the level of lobbying by it and hence increase the level of the CET. As for the firms in the member countries, a reduction in ρ^A and ρ^B does not have any direct effect on their lobbying levels, but they can change because of indirect effects via changes in lobbying levels by the firms in country C. Clearly, if the firms inside the CU and those outside are strategic substitutes in lobbying, the decrease in lobbying by firms outside the CU will increase lobbying by the firms inside the CU and this will also increase the

equilibrium level of the CET. Thus, if the firms inside the CU and those outside are strategic substitutes in lobbying, a tightening of regulation against lobbying from outside the CU will increase the equilibrium level of the CET. Otherwise, the effect will be ambiguous. Formally,

Proposition 2 *A tightening of regulations against lobbying by firms outside the Customs Union will increase the equilibrium level of the common external tariff if the firms inside the Customs Unions and those outside are strategic substitutes in lobbying.*

3 Conclusion

An emerging literature is throwing light on internationalization of the lobbying process, where firms of one nation lobby the government of another for greater protection in a common market, or for better to access to a protected one. This contribution is one of the first to analyze the conflicting incentives for firms to lobby for and against protection in the context of a customs union like the EU. We identify three types of lobbying: domestic, cross-border of the intra-union type, and cross-border of a pure foreign type - where firms from outside the union lobby the member governments of a CU. We offer a model where the interdependence of these three types of lobbying and their effect on the CET are analyzed within the context of a tractable framework. We show that it is not necessarily true that intra-union cooperation in lobbying will raise the CET. Along these lines, we identify a sufficient condition for the cooperative CET to rise above its non-cooperative level. Similarly, it is also not clear that stricter regulations against lobbying from outside the CU will raise the CET. However, the sufficient condition that allows the cooperative CET to be higher (than its non-cooperative level) is also sufficient for the CET to rise in the face of stricter regulations against foreign lobbying.

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