Lobby Interaction and Trade Policy*

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Abstract

The paper introduces lobby interaction in the ‘protection for sale’ framework. Special interest groups provide unconditional contributions where the marginal contribution of a lobby is decreasing in the total sum collected by the government. In contrast to the ‘protection for sale’ model, for a given proportion of capital owners in the organized sectors, an increase in the number of lobbies has an impact on trade policy. It is also shown that an increase in the number of lobbies has two opposite effects on each lobby’s contribution: a competition effect which lowers a lobby’s contribution and a political influence effect which tends to increase its contribution.

1 Introduction

Many economic decisions in trade policy and public finance provide benefits for small groups of agents while the cost is incurred by the society as a whole. Grossman and Helpman (1994) adapt the common agency approach in Bernheim and Whinston (1986) to develop the ‘protection for sale’ model which aims to explain the influence of organized interest groups on trade policy. They show that the policy choice induced by contingent contributions maximizes a weighted sum of the interest of organized groups and that of the decision-maker. This model has become a workhorse model in the political economy of trade policy.¹

One of the results in the ‘protection for sale’ model is that only the total proportion of capital owners in organized sectors matters for the policy outcome, that is, lobbying by a few

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¹Several recent papers have extended the ‘protection for sale’ model to incorporate endogenous process of lobby formation (Mitra (1999), foreign lobbies (Gawande et al, 2006), lobbying between upstream and downstream producers (Gawande and Krishna, 2005), labour unions (Matschke and Sherlund, 2006), firm size (Bombardini, 2008).
large interest groups would result in the same tariffs or subsidies as lobbying by many small ones. This result follows from the fact that the assumption on the government objective function does not allow for lobby interaction. In this paper I analyze a different government objective function and allow for the marginal contribution of a lobby to be decreasing in the total amount of money collected by the government. In particular, I assume that the government puts an additional weight on the welfare of an organized lobby equal to the proportion of this lobby contribution in relation to the total sum contributed by all lobbies to the government. I show that in contrast to the ‘protection for sale’ model, the number of organized interest groups does matter for the choice of trade policy.

Such an objective function can be thought as an alternative way to model the effects of contributions on trade policy. In the ‘protection for sale’ model, campaign contributions are a form of political investment, that is special interest groups can buy economic policy directly by contributing to the politicians. However, there is little evidence on connection from campaign contributions to legislative voting behavior.\(^2\) Ansolabehere et al (2003) argue against the theory of campaign contributions as a political investment. They suggest that one of the alternative explanations is that “... money buys access, rather than policy directly. Legislators and their staffers are busy people. Campaign contributions are one way to improve the chance of getting to see the legislator about matters of concern to the group.” Hence, one can argue that the money spent by an organized group buys the influence over economic policy, but the extent of such influence depends on the money spent by other groups.

Another key difference between Grossman and Helpman (1994) and this paper is that in the former the lobbies provide contribution schedules to the government, that is a lobby can commit to a contingent policy contribution before the policy is chosen. This assumption generates a multiplicity of equilibrium levels of contributions and the authors focus only on a particular ‘truthful’ equilibrium. One also cannot solve explicitly for the equilibrium levels of contributions and analyze the effects of a stronger competition among interest groups, i.e., larger number of lobbies, on the contributions. In my model, special interest groups provide unconditional payments to the government, hence, I can explicitly derive equilibrium levels of contributions. This allows me to identify two opposite effects of an increase in the number of lobbies: the competition effect which decreases lobby’s contribution and the political influence effect which tends to increase it. The latter effect dominates for a smaller number of firms, as the decrease in political influence has a more significant impact on each lobby when there are only a few lobbies with access to the politicians.

There is substantial empirical support for the money-buys-access idea. For instance, Ansolabehere et al (2003) argue against the theory of campaign contributions as a political investment. They suggest that one of the alternative explanations is that “... money buys access, rather than policy directly. Legislators and their staffers are busy people. Campaign contributions are one way to improve the chance of getting to see the legislator about matters of concern to the group.” Hence, one can argue that the money spent by an organized group buys the influence over economic policy, but the extent of such influence depends on the money spent by other groups.

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\(^2\)See Ansolabehere et al (2003) for the review of empirical literature on this topic.
solabehere et al (2002) find that in 1997-1998 interest groups spent $3 billion on lobbying and only $300 million on PAC contributions. See also Wright (1989), Hall and Wayman (1990), Milyo et al (2000) among others. The theoretical literature on this topic, which is relatively scarce, focuses on the signalling role of contributions. Austen-Smith (1995) analyzes a model with one group seeking access for informational lobbying. Lohmann (1995) looks at how strategic informational lobbying is affected by the free riding problem. Austen-Smith (1998) focuses on how access fee and information disclosure depends on similarity of policy preferences of the politician and the lobbies. Finally, in Cotton (2009) a politician chooses between selling policy favors and selling access to interest groups.

Another related paper is Drazen et al (2007) who also note that all lobby interaction is modelled away in the Grossman and Helpman framework. They look at the effects of caps on allowed contributions and find that when they allow for diminishing marginal benefits from aggregate contributions to politicians an additional channel through which lobbies gain from contribution caps arises - an increase in the marginal benefit of their contribution allows them to obtain the same policy level at a lower contribution.

An unsatisfactory feature of my model is that there is no explicit electoral competition which would result in the analyzed objective function. Grossman and Helpman (1996) analyze electoral competition between two political parties and show that each party maximizes a weighted sum of the aggregate welfare of informed voters and members of lobby groups. In their model, party platforms do not converge and equilibrium contributions are positive. However, this result is not robust to the modelling assumptions - Bennenden (2003) considers a different timing structure and shows that in this case there will be convergence in party platforms and, hence, none of the special interest groups will contribute.

The rest of the paper proceeds as follows. Section 2 outlines the model. In Section 3, I focus on the symmetric equilibrium and analyze the effects of an increase in the number of lobbies. Section 4 concludes.

2 The Model

The description of the economy follows Grossman and Helpman (1994) with some key differences which will be outlined later. The economy is populated by $L$ agents with the utility function

$$c^h_0 + \sum_{i=1}^{N} u_i (c_i),$$

\footnote{As discussed in Persson and Tabellini (2000).}
where sub-utility functions, $u_i$, are twice continuously differentiable and strictly concave, $c^h_0$ is individual $h$'s consumption of the numeraire export good, and $c^h_i$ is his consumption of good $i \in [1, N]$. Solving the utility maximization problem we get a vector of demand functions 
\[ d(p) = (d_1(p_1), \ldots, d_N(p_N)) \], where $p$ is a vector of prices. Consumption of the numeraire good $c^h_0 = I^h - pd(p)$, where $I^h$ is individual $h$’s income. Then, individual $h$’s welfare equals $I^h + S(p)$, where
\[ S(p) = \sum_{i=1}^N u_i [d_i(p_i)] - pd(p) \]
is consumer surplus. Using Roy’s identity we have
\[ \frac{dS(p)}{dp_i} = -d_i(p_i). \]

The production structure is as follows. One unit of the numeraire good is produced using one unit of labor, hence, wage is fixed at unity. Each of $N$ goods is produced using capital specific to this sector and a mobile factor, labor. The return to specific capital is $\pi_i(p_i)$ with $\pi_i'(p_i) = y_i(p_i)$, where $y_i(p_i)$ is output of good $i$. It is assumed that the specific capital in each sector $i$ is owned by $H_i$ agents. Let $\lambda_i = \frac{H_i}{L}$ denote the proportion of population which owns capital in sector $i$. The total number of capital-owners is denoted by $H = \sum_i H_i$.

I consider a case of a small open economy, that is, the world prices are fixed at $p^*$. Each industry may receive a specific tariff (subsidy) $t_i$, hence, the domestic prices are $p_i = p^*_i + t_i$. Imports of good $i$ are equal to $m_i(p_i) = Ld_i(p_i) - y_i(p_i)$ and the tariff revenue is $T(p) = \sum_{i=1}^N (p_i - p^*_i) m_i(p_i)$, which is redistributed by a per capita subsidy of $\frac{T(p)}{L}$.

The aggregate welfare of the capital-owners in sector $i$ is
\[ W_i(p) = \pi_i(p_i) + H_i(1 + S(p)) + \frac{H_i}{L} T(p) \] (1)
while the aggregate welfare of $(L - H)$ agents who do not own any capital is
\[ W_0(p) = (L - H)(1 + S(p)) + \frac{L - H}{L} T(p) \] (2)

Then the social welfare is
\[ W = \sum_{i=1}^N W_i(p) + W_0(p) = \sum_{i=1}^N \pi_i(p_i) + L(1 + S(p)) + T(p) \] (3)

The subset of sectors $J$ is organized into lobbies where $J$ also denotes the number of organized lobbies. The proportion of population who are capital-owners in organized sectors is denoted by
\[ \lambda^0 = \frac{\sum_{j \in J} H_j}{L}. \]

I assume that each organized lobby $j \in J$ provides an unconditional contribution $C_j$ to the government. This is the first key difference between my model and the ‘protection for sale’
model, as in the latter the lobbies provide contribution schedules contingent on future policies. The timing is as follows. First, each organized sector decides on a contribution $C_j$. Second, the government chooses a vector of tariffs (equivalently, a vector of prices $p$) to maximize its objective function $G(p)$.

The second difference is the way the government objective function is modelled, that is, how the marginal benefit of contribution of a lobby is affected by the contributions of other lobbies. In the ‘protection for sale’ model the government maximizes the weighted sum of the social welfare and total contributions, i.e., $G = \sum_{j \in J} C_j + \alpha W$, and hence, the marginal benefit of contribution by each lobby does not depend on how much the government collects in total from all organized sectors. In this paper I consider a setting where the marginal contribution of a lobby is decreasing in the total sum collected. In particular, I assume that the government values the welfare of the organized sectors weighted proportionately to their contributions, i.e., the government’s objective function is

$$G(p) = \alpha W(p) + \sum_{j \in J} \frac{C_j W_j(p)}{C}$$

where $C = \sum_{j \in J} C_j$ is the total amount contributed by all lobbies.

This objective function can be interpreted in the following way. The government politicians care about the social welfare. However, they also spend their time in the office talking to organized lobbies and then, when they decide on trade policy, they take the interests of those groups into account. Since politicians’ total time is limited, they allocate a time slot to each lobby in proportion to the contribution paid by this lobby. Hence, a contribution is basically a price paid for access to the politicians.

First, I solve for the equilibrium price vector $p$ given the vector of contributions $(C_1, ..., C_J)$. Start with an organized sector $k \in J$. Differentiating (4) with respect to price $p_k$ we have

$$\frac{dG(p)}{dp_k} = \alpha \frac{dW(p)}{dp_k} + \sum_{j \in J} \frac{C_j dW_j(p)}{C}$$

where

$$\frac{dW(p)}{dp_k} = y_k(p_k) - L d_k(p_k) + m_k(p_k) + t_k m'_k(p_k) = t_k m'_k(p_k)$$

Hence,

$$\frac{dG(p)}{dp_k} = \alpha t_k m'_k(p_k) + \frac{1}{C} \left[ C_k y_k(p_k) + \sum_{j \in J} C_j \left( -H_j d_k(p_k) + \frac{H_j}{L} (m_k(p_k) + t_k m'_k(p_k)) \right) \right]$$

$$= t_k m'_k(p_k) \left( \alpha + \frac{A}{C} \right) + \frac{[C_k - A]}{C} y_k(p_k)$$

where $A = \sum_{j \in J} C_j \lambda_j$. 
In equilibrium, the government chooses price \( p_k \) such that
\[
\frac{dG(p)}{dp_k} = 0.
\]
Then the equilibrium specific tariff in an organized sector \( k \) equals
\[
t_k = p_k - p_k^* = -g_k \frac{C_k - A}{\alpha C + A} \tag{5}
\]
where \( g_k \equiv \frac{y_k}{m'_k} < 0 \). Hence, we have \( t_k > 0 \), that is organized sectors are protected by import tariffs. Following Mitra (1999), I also assume that \( g'_k < 0 \).

The corresponding ad valorem tariff equals
\[
\tau_k = \frac{p_k - p_k^*}{p_k} = \frac{z_k C_k - A}{\epsilon_k \alpha C + A} \tag{6}
\]
where \( z_k = \frac{y_k}{m_k} \) is the output-imports ratio and \( \epsilon_k = -\frac{m'_k p_k}{m_k} \) is the elasticity of imports.

Next, consider an unorganized sector \( k \notin J \). Differentiating (4) with respect to price \( p_k \) we have
\[
\frac{dG(p)}{dp_k} = \alpha t_k m'_k(p_k) + \frac{1}{C} \left[ \sum_{j \in J} C_j \left( -H_j d_k(p_k) + \frac{H_j}{L_j} (m_k(p_k) + t_k m'_k(p_k)) \right) \right] = t_k m'_k(p_k) \left( \alpha + \frac{A}{C} \right) - \frac{A}{C} y_k(p_k)
\]
Hence, the equilibrium specific import subsidy in an unorganized sector \( k \notin J \) equals
\[
t_k = p_k - p_k^* = g_k \frac{A}{\alpha C + A} < 0 \tag{7}
\]
and the corresponding ad valorem import subsidy is
\[
\tau_k = \frac{p_k - p_k^*}{p_k} = -\frac{z_k}{\epsilon_k} \frac{A}{\alpha C + A} \tag{8}
\]

Finally, I solve for the equilibrium level of contributions. Each organized industry \( k \in J \) chooses a contribution \( C_k \) to maximize its welfare net of contribution, \( W_k(p) - C_k \). Hence, in equilibrium \( C_k \) satisfies the following condition
\[
\left( \frac{dW_k(p)}{dC_k} - 1 \right) C_k = 0
\]
which we can rewrite as
\[
\left( \frac{dW_k(p)}{dp_k} \frac{dp_k}{dC_k} + \sum_{j \in J} \frac{dW_k(p)}{dp_i} \frac{dp_i}{dC_k} + \sum_{i \notin J} \frac{dW_k(p)}{dp_i} \frac{dp_i}{dC'_k} - 1 \right) C_k = 0 \tag{9}
\]
Using (5) and (7) we have that the effects of contribution \( C_k \) on prices equal

\[
\frac{dp_k}{dC_k} = \frac{g_k C_k (\alpha + \lambda_k) + \alpha (\lambda_k C - A) - A - \alpha C}{\alpha C + A} + g_k' (C_k - A) \tag{10}
\]

\[
\frac{dp_j}{dC_k} = \frac{g_j C_j (\alpha + \lambda_k) + \alpha (\lambda_k C - A)}{\alpha C + A} + g_j' (C_j - A) \quad \text{for } j \in J, j \neq k
\]

\[
\frac{dp_i}{dC_k} = \frac{g_i \alpha (\lambda_k C - A)}{\alpha C + A} \quad \text{for } i \notin J
\]

Next, using (1) we derive the effects of prices on welfare of lobby \( k \) to be equal to

\[
\frac{dW_k}{dp_k} = y_k \frac{\alpha C + A - \lambda_k (\alpha C + C_k)}{\alpha C + A} \tag{11}
\]

\[
\frac{dW_k}{dp_j} = -\lambda_k \left( \frac{C_j + \alpha C}{\alpha C + A} \right) y_j, \ j \neq k, j \in J
\]

\[
\frac{dW_k}{dp_j} = -\lambda_k \left( \frac{\alpha C}{\alpha C + A} \right) y_j, \ j \notin J
\]

Then, the equilibrium contributions \( C_k, k \in J \), are determined by a set of conditions (9) – (11).

## 3 Symmetric Lobbies

In this Section I analyze a case where all sectors are symmetric, i.e., all sectors have the same demand and supply functions and the same world prices. I also assume that the proportion of population that owns a specific factor in any organized sector is the same: \( \lambda_i = \lambda \). Then, the proportion of the population which owns capital in organized sectors equals \( \lambda^0 = \lambda J \). I introduce the following notation

\[
y_j = y_o, g_j = g_o, z_j = z_o, e_j = e_o, \text{ for all } j \in J
\]

\[
y_i = y_u, g_i = g_u, z_i = z_u, e_i = e_u, \text{ for all } i \notin J
\]

I focus on a symmetric equilibrium where all lobbies contribute the same amount, i.e., \( C_j = c \). Then using (5) – (6) and (7) – (8) it is straightforward to show that the equilibrium specific and ad valorem tariffs/subsidies are

\[
\tau_i = \frac{-g_i \delta_i - \lambda J}{\alpha_i \lambda J + \lambda J} = \frac{-g_i \delta_i - \lambda^0}{\alpha_i \lambda J + \lambda^0} \tag{12}
\]

\[
\tau_i = \frac{z_i \delta_i - \lambda J}{\epsilon_i \lambda J + \lambda J} = \frac{z_i \delta_i - \lambda^0}{\epsilon_i \lambda J + \lambda^0}
\]

where \( \delta_i = \begin{cases} 1 & \text{if } i \in J \\ 0 & \text{if } i \notin J \end{cases} \) is an indicator function which shows whether a sector \( i \) is organized or not.
Next, I find the equilibrium levels of contributions. Using (10) we have that the effects of contribution $C_k$ on prices are

$$
\frac{dp_k}{dC_k} = \frac{(-g_o)(J-1)}{jc ((\alpha + \lambda) J + g'_o (1-\lambda J))}
$$

$$
\frac{dp_j}{dC_k} = \frac{g_o}{jc J (\alpha + \lambda) + g'_o (1-\lambda J)} \text{ for } j \in J, \ j \neq k
$$

$$
\frac{dp_i}{dC_k} = 0 \text{ for } i \not\in J
$$

From (11) we have that the effects of tariffs on the welfare of lobby $k$ are

$$
\frac{dW_k}{dp_k} = y_o \frac{(\alpha + \lambda) J - \lambda (\alpha J + 1)}{(\alpha + \lambda) J}
$$

$$
\frac{dW_j}{dp_j} = \frac{-\lambda (1 + \alpha J)}{(\alpha + \lambda) J} y_o \text{ for } j \in J, \ j \neq k
$$

Hence, in the interior equilibrium, condition (9) becomes

$$
\frac{dW_k(p)}{dC_k} - 1 = \frac{(-g_o y_o)(J-1)}{jc ((\alpha + \lambda) J + g'_o (1-\lambda J))} - 1 = 0
$$

and the equilibrium contribution for each lobby equals

$$
c = \frac{(-g_o y_o)(J-1)}{J (\alpha J + \lambda^0 + g'_o (1-\lambda^0))}
$$

(13)

The following Proposition summarizes these results.

**Proposition 1** In the symmetric equilibrium, the government chooses import tariffs/subsidies equal to $\tau_i = \frac{z_i \delta_i - \lambda^0}{e_i \alpha J + \lambda^0}$ and each organized sector contributes $c = \frac{-g_o y_o (J-1)}{J (\alpha J + \lambda^0 + g'_o (1-\lambda^0))}$.

### 3.1 Comparative Statics

Next, I look at the effects of an increase in the number of lobbies on the equilibrium tariffs and contributions. First, consider the case where one unorganized sector becomes an organized one while the proportion of the population in each lobby does not change, that is, $J$ increases but $\lambda$ stays constant. Using (12), it is straightforward to show that this results in lower tariffs in organized sectors and does not affect the subsidies in the unorganized sectors:

$$
\frac{d\tau_o}{dJ} = \frac{d\tau_o}{dt_o} \frac{dt_o}{dJ} = \frac{d\tau_o}{dt_o} \frac{g_o}{J ((\alpha + \lambda) J + g'_o (1-\lambda J))} < 0
$$

$$
\frac{d\tau_u}{dJ} = 0
$$

Note that this is different from the result in the ‘protection for sale’ model where an increase in $J$ raises subsidies in unorganized sectors.
Next, using (13) we have that the effect of an increase in $J$ on contribution $c$ equals

$$\frac{dc}{dJ} = g_0 y_0 \frac{(\alpha + \lambda - g_0 \lambda)}{J ((\alpha + \lambda) J + g_0 (1 - J \lambda))^2} (J^2 - 2J - b)$$

where $b = \frac{g_0}{\alpha + \lambda - g_0 \lambda}$. I assume that $g_0' > -\frac{\alpha + \lambda}{1 - \lambda}$ in the rest of this paper, so that condition $b > -1$ always holds. Hence, the contribution from each sector, $c$, is increasing in the number of lobbies if there are only a few organized sectors, i.e., $J < 1 + \sqrt{1 + b}$. Otherwise, an increase in $J$ lowers each sector’s contribution.\(^5\)

What is the intuition behind this result? An increase in the number of lobbies decreases the weight that the government assigns to the welfare of each organized group. Hence, each lobby has now an incentive to increase its own contribution to restore its political influence. On the other hand, the marginal benefit of its contribution decreases as the competition among lobbies is enhanced and, hence, there is also an incentive to decrease $c$, so that the marginal benefit of contribution equals its marginal cost (which is 1). For a fixed $\alpha$ the former effect is stronger for a smaller number of firms, as the decrease in political influence, that is the change from $\frac{1}{J}$ to $\frac{1}{J + 1}$, has a more significant impact on each lobby. Then, as the government becomes more benevolent, that is as $\alpha$ increases, the latter effect starts to dominate at a larger number of lobbies, i.e., $1 + \sqrt{1 + b}$ rises.

What can we say about total contributions collected by the government, $C = Jc$? It is straightforward to see that $C$ is increasing in the number of lobbies:

$$\frac{dC}{dJ} = (-g_0 y_0) \frac{\alpha + \lambda + g_0' (1 - \lambda)}{((\alpha + \lambda) J + g_0 (1 - J \lambda))^2} > 0$$

The following Proposition summarizes these results.

**Proposition 2** In the symmetric equilibrium, for a given proportion of population in each organized sector, $\lambda$, an increase in the number of lobbies, $J$, decreases tariffs in the organized sectors, does not affect subsidies in unorganized sectors, and raises total contributions $C$. Contribution from each sector, $c$, increases iff the number of organized sectors is sufficiently small, i.e., $J < 1 + \sqrt{1 + b}$.

Now, suppose that the total proportion of organized capital owners in the economy, $\lambda^0$, is fixed. Note that, as $J$ increases, the proportion of capital owners in each organized sector, $\lambda$, decreases in this case, that is each sector becomes smaller.

\(^5\)Note that if condition $g_0' > -\frac{\alpha + \lambda}{1 - \lambda}$ does not hold then an increase in $J$ always decreases a lobby’s contribution.
To derive the effects on tariffs and subsidies, I differentiate (12) to show that

\[
\frac{d\sigma_u}{dJ} = \frac{d\sigma_u}{d\sigma_o} \left( -\frac{\alpha \sigma_o}{\alpha J + \lambda^0 + g_o' (1 - \lambda^0)} \right) < 0
\]

\[
\frac{d\tau_u}{dJ} = \frac{d\tau_u}{d\tau_o} \left( -\frac{\alpha \tau_o}{\alpha J + \lambda^0 (1 - g_o')} \right) > 0
\]

Hence, we have that tariffs in organized sectors fall while the subsidies in the unorganized sectors rise. Note that in the ‘protection for sale’ model for a fixed \(\lambda^0\), an increase in the number of lobbies does not have any impact on tariffs/subsidies. The reason is that there is no interaction among lobbies, and lobbying by a few large interest groups would result in the same tariffs/subsidies as lobbying by many small ones. Hence, only the total proportion of capital owners in organized sectors matters for the government’s decision making, and a change in the number of lobbies does not affect trade policy, as long as \(\lambda^0\) stays fixed.

Next, I differentiate (13), keeping \(\lambda^0\) constant

\[
\frac{dc}{dJ} = \alpha g_o y_o \frac{J^2 - 2J - \beta}{J^2 (\alpha J + \lambda^0 + g_o' (1 - \lambda^0))^2}
\]

where \(\beta = \frac{\lambda^0 + g_o' (1 - \lambda^0)}{\alpha}\). Hence, the result is similar to that above - each sector’s contribution is increasing in the number of lobbies if and only if \(J\) is sufficiently small, i.e., \(J < 1 + \sqrt{1 + \beta}\). Again, it is straightforward to show that the total sum collected by the government is increasing in \(J\):

\[
\frac{dC}{dJ} = \frac{(-\alpha g_o y_o)}{(\alpha J + \lambda^0 + g_o' (1 - \lambda^0))^2} \left(1 + \beta \right) > 0
\]

**Proposition 3** In the symmetric equilibrium, for a given proportion of capital-owners in organized sectors, \(\lambda^0\), an increase in the number of lobbies, \(J\), decreases the tariffs in organized sectors, raises the subsidies in unorganized sectors, and increases total contributions \(C\). Each sector’s contribution \(c\) increases iff the number of organized sectors is sufficiently small, i.e., \(J < 1 + \sqrt{1 + \beta}\).

Finally, what can we say about the relationship between \(b\) and \(\beta\)? We have that

\[
\beta - b = (1 - g_o') g_o \lambda (1 - \lambda^0) + \lambda^0 (\lambda + \alpha) \frac{\alpha}{\alpha + \lambda - g_o' \lambda} > 0
\]

and, hence, \(\beta > b\). Therefore, for a very small number of organized sectors, i.e., if \(J < 1 + \sqrt{1 + b}\), a higher \(J\) increases the contribution from each sector in both cases: when \(\lambda\) is fixed and when \(\lambda^0\) is fixed. When \(J\) is in the medium range: \(1 + \sqrt{1 + b} < J < 1 + \sqrt{1 + \beta}\), then a higher \(J\)

\[\text{Note that condition } \beta + 1 > 0 \text{ holds given the assumption } g_o' > -\frac{\alpha + \lambda}{1 - \lambda} \text{ and the fact that } \lambda^0 = J \lambda > \lambda.\]
decreases \( c \) in the former case but increases \( c \) in the latter case. Finally, when \( J \) is very large, i.e., \( J > 1 + \sqrt{1+\beta} \), then an increase in \( J \) reduces contribution from each organized sector in either case.

4 Conclusion

In this paper I introduce lobby interaction in the ‘protection for sale’ framework. I consider an alternative government objective function to allow for the marginal contribution of a lobby to be decreasing in total sum collected by the government. In contrast to the ‘protection for sale’ model, for a given proportion of capital owners in the organized sectors, an increase in the number of lobbies has an impact on trade policy. It is also shown that an increase in the number of lobbies has two opposite effects on each lobby’s contribution: a competition effect which decreases a lobby’s contribution and a political influence effect which tends to increase its contribution.

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