

August 13, 2002

Political Contributions, Foreign Direct Investment and Mergers

By

M. Ozgur Kayalica[†] and Rafael E. Ramirez[‡]

Abstract

We examine the effects of mergers and internal groups (lobbies) in shaping national policies towards foreign direct investment. Lobbying is modeled following the political contributions approach. In this work we develop a partial equilibrium model of an oligopolistic industry in which a number of domestic and foreign firms compete in the market for a homogeneous good in a host country. It is assumed that the number of foreign firms is endogenous and can be affected by the government policy in the host country. Domestic firms offer political contributions to the government that are tied to the government's policy choices. Then, the government sets the policy (subsidies) to maximize a weighted sum of total contributions and aggregate social welfare. It is also assumed that there is unemployment in the host country. We show that both contributions and mergers may change the policy outcome considerably.

JEL Classification: F12, F13

Keywords: Foreign Direct Investment, Mergers, Lobby

[†] Department of Economics, Sakarya University, Adapazari, Turkey.
(kayalica@sakarya.edu.tr)

[‡] Department of Economics, University of Guadalajara, Guadalajara, Mexico.
(rafaelsa@cucea.udg.mx)

Mailing address: M.Ozgur Kayalica, Department of Economics, Sakarya University, Adapazari, Turkey. TEL: +90-264-3460333/186, FAX: +90-264-3460332, e-mail: kayalica@sakarya.edu.tr or kayalica@yahoo.com

An earlier version of the paper was presented at the European Trade Study Group annual conference, held in Brussels during September 2001. We are grateful to the participants for helpful comments.

1 Introduction

As an important element of global economic activity, Foreign Direct Investment (FDI) has received enormous attention from scholars worldwide.¹ This includes the issue of increasing competition amongst countries trying to attract FDI. Bulk of the literature considers the host country government as a social welfare maximising agent. In reality, governments design their policies not only according to welfare concerns, but also in response to the interests of organised lobby groups.² The Trade Related Investment Measures (TRIM) agreement that is based on the GATT principles on trade in goods and regulates foreign investment, does not govern the entry and treatment regulations of FDI, but focuses on the discriminatory treatment of imported and exported products and not the services. This suggests that national governments can encourage or discourage foreign investors in a discriminatory manner by choosing the policy tools that do not have a direct effect on international trade. Therefore, the political processes generating economic policy is likely to be affected by pressure groups as far as foreign investment is concerned.

There are many models in the international trade literature that uses political process. These include the tariff-formation function approach of Findlay and Wellisz (1982), the political support function approach of Hillman (1989), the median-voter approach of Mayer (1984), the campaign contributions approach of Magee et al (1989), and the political contributions approach of Grossman and Helpman (1994a).³

The use of political competition in the theory of FDI stems back to Bhagwati

¹See, for example, Brander and Spencer (1987), Ethier (1986), Haufler and Wooton (1999), Helpman (1984), Horstmann and Markusen (1987), and (1992), Itagaki (1979), Janeba (1995), Lahiri and Ono (1998a) and (1998b), Markusen (1984), Markusen and Venables (1998), Motta (1992), and Smith (1987).

²For instance, almost all countries have well-organised local producers (such as the automobile industry) who lobby the government for higher levels of protection against imported goods or against the goods of the foreign-owned plants producing in the country.

³The literature has been surveyed in several works, including Magee, Brock and Young (1989), and Rodrik (1995).

(1985) and his notion of *quid pro quo* (protection-threat-induced FDI) in which he studies how the protection threats affect FDI entry. Takemori and Tsumagari (1997) focus on whether FDI is helpful in reducing the protectionism, and thus achieving free trade. Hillman and Ursprung (1993) also explore how the presence of FDI affects the emergence of protection. They develop a model where both national and multinational firms lobby for protection in the jurisdictions where they have plants. Unlike the authors above, Ellingsen and Wärneryd (1999) deploy a model where the domestic industry does not want the maximum protection and lobby for less protection. They argue that this is because a high level of protection could induce FDI to jump the trade barriers and even may be more harmful for the domestic firms. Konishi et al (1999), using common agency framework, construct political economy model in which the choice of protection (between tariff and voluntary export restraint) is endogenously determined. Grossman and Helpman (1994b) combines *quid pro quo* FDI with their political contributions approach and develop a model in which trade policy and FDI are endogenously and jointly determined. In all these works, trade policies, such as tariff and quota, are the only policy instruments available to the government.

In this work we develop a partial equilibrium model of an oligopolistic industry in which a number of domestic and foreign firms compete in the market for a homogeneous good in a host country. It is assumed that the number of foreign firms is endogenous and can be affected by government policy in the host country. The host country government uses lump sum profit subsidies to attract FDI. This distinguishes our model from the works mentioned in the previous paragraph since we allow the government to use subsidies instead of direct trade policies like tariff and quota. Moreover, we allow uniform policies (as well as discriminatory policies) to see how the behaviour of lobby group changes when receiving the same benefit as the foreign ones. Furthermore, we allow for free entry of foreign firms. Lobbying is modelled following the political contributions approach. Domestic firms offer political contributions to the government which are tied to the government's policy choices. Then, the government sets the policy to maximise a weighted sum of total contributions and

aggregate social welfare. Lobbying in our model has the structure of the common agency problem explored by Bernheim and Whinston (1986), which is later used by Grossman and Helpman (1994a) to characterise the political equilibrium under trade protection and finally generalised by Dixit, Grossman and Helpman (1997) for wider economic applications.

Under the above specification, we examine aspects of the political relationship between the government and the domestic firms under different degrees of corruption. In other words, the optimal policies in the absence of lobbying are also analysed to see how policies change by pressure from the interest group. The basic structure is given in the next section where we use a lobbying framework that follows Grossman and Helpman (1994a) and Dixit et al (1997). In the following sections lump sum profit subsidies are investigated. We analyse discriminatory and uniform policies, and assess the comparative statics. We conclude in the last section.

2 The Basic Framework: Lobbying

We consider an economy in which there are m identical domestic firms and n identical foreign firms. The domestic firms form a lobby group whose political contribution schedule is defined by $C(S)$, where S is a lump-sum subsidy determined by the government, which we examine in detail in the next section⁴. Each domestic firm has the following utility,

$$V^d = \pi^d - C, \tag{1}$$

where π^d is the profit of a domestic firm. Consumers have identical quasi-linear preferences and are given some exogenous level of income, \bar{Y} . The preferences of the consumers are represented by $u(y, D) = y + f(D)$ where y is the consumption of a numeraire good produced under competitive conditions with a price equal to 1. There is also just one factor of production whose price is determined in the competitive sec-

⁴The model is adapted from Kayalica and Lahiri (2001) which developed a similar framework of FDI in the presence of full employment.

tor. We denote the consumption of the non-numeriare good by D , while function f is increasing and strictly concave in D . Hence, with income \bar{Y} each individual consumes $D = g(p)$ of the non-numeriare good and $y = \bar{Y} - pg(p)$ of the other goods (where p is the price of non-numeriare good). We can then derive the consumers' indirect utility.

$$V^c = CS + \bar{Y} \quad (2)$$

where CS is the consumers' surplus ($CS = \int_{p=0}^{p=p^*} f(g(p)) - pg(p)$). The government collects the subsidy cost from consumers by lump sum taxation. We denote the total cost of the subsidy by TR . As in Brander and Spencer (1987), we assume that there is unemployment in the host country. Denoting the level of employment benefit by E , the government's objective can be written as

$$G = \rho mC + (V^d m + V^c - TR + E) \quad (3)$$

where m denotes the number of domestic firms, and $\rho > 1$ is a constant parameter.⁵ The second term in (3) is the total social welfare.

The political equilibrium can be determined as the result of a two-stage game in which the lobby (representing domestic firms) chooses its contribution schedule in the first stage and the government sets the level of subsidy in the second. Then, the political equilibrium consists of a political contribution schedule $C^*(S)$, that maximises the profits of all the domestic firms given the anticipated political optimisation by the government, and a subsidy level, S^* , that maximises the government's objective given by (3), taking the contribution schedule as given.

As discussed in Dixit et al (1997), the model can have multiple sub-game equilibria, some of which may be inefficient. Dixit et al (1997) develop a refinement that selects truthful equilibria that result in Pareto-efficient outcomes.⁶ Stated formally,

⁵Using equations (1) and (2) government's objective function can also be written as $G = \rho Cm + (\pi^d m - Cm + CS + \bar{Y} - TR + E)$. Reorganizing the equation, we get $G = (\rho - 1)Cm + (\pi^d m + \bar{Y} + CS - TR + E)$. Hence, government attaches a positive weight to contributions provided that $\rho > 1$. In other words, there is no political relationship between the government and the domestic firms when $\rho = 1$. The weight that the government attaches to social welfare is normalised to one.

⁶Bernheim and Whinston (1986) develop a refinement in their menu-auction problem. Following

let $(C^0(S^0, V^{d^0}), S^0)$ be a truthful equilibrium in which V^{d^0} is the equilibrium utility level of each domestic firm. Then, $(C^0(S^0, V^{d^0}), S^0, V^{d^0})$ is characterised by

$$C(S, V^{d^0}) = \text{Max}(0, A) \quad (4)$$

$$S^0 = \text{Argmax}_S \{ \rho C(S, V^{d^0})m + V^{d^0}m + (V^c - TR + E)(S) \} \quad (5)$$

and

$$\begin{aligned} V^d(S_1)m + V^c(S_1) - TR(S_1) + E(S_1) = \\ \rho C(S^0, V^{d^0})m + V^{d^0}(S^0)m + V^c(S^0) - TR(S^0) + E(S^0) \end{aligned} \quad (6)$$

where V^c is defined in (2) and

$$V^{d^0} = \pi^d - A \quad (7)$$

$$S_1 = \text{Argmax}_S \{ V^d(S)m + V^c(S) - TR(S) + E(S) \} \quad (8)$$

Equation (4) characterises the truthful contribution schedule chosen by the lobby, where A can be interpreted as the compensation variation. Hence, equation (4) (together with (7)) states that the truthful contribution function $C(S, V^{d^0})$ relative to the *constant* V^{d^0} is set to the level of compensating variations. In other words, under truthful contribution schedules the payment to the government is exactly equal to the change in domestic firms' profits that is caused by a change in policy S (see Dixit et al (1997, p.760)). Equation (5) states that the government sets the subsidy level to maximise its objective, given the contribution schedule offered by the domestic firms.

Equation (6) implies that in equilibrium the contribution of the lobby has to provide the government at least the same level of utility that the government could get if it did not accept any contributions. The lobby pays the lowest possible contribution to induce the government to set S^0 defined by (5). Then, the government will be indifferent between implementing the policy (S_1), by accepting no contributions and implementing the equilibrium policy (S^0) and accepting contributions. In the first this, first Grossman and Helpman (1994) and later Dixit et al (1997) develop a refinement (as in Bernheim and Whinston (1986)) for the political contribution approach, that selects Pareto-efficient actions.

case, contribution would be zero and the government would maximise its objective function as if the domestic firms were politically unorganised.⁷

Totally differentiating (3) we get

$$dG = \rho mdC + dCS - dTR + dE \quad (9)$$

where, differentiating (4) (and (7))⁸

$$dC = d\pi^d \quad (10)$$

When $\rho = 1$ equation (9) serves for the case in which the government refuses the firms' contributions, and simply maximises the social welfare. That is, when $\rho = 1$ we obtain S_1 defined by (8). Equation (9) helps us to examine the public policy outcome of political relationship between the government and the lobby. After analysing the equilibrium subsidy level, we focus on the the effects of mergers and the degree of corruption on the equilibrium subsidy and contribution levels.

It is a well known fact that

$$dCS = -Ddp. \quad (11)$$

Having described the political equilibrium, we shall now introduce the rest of the model. We consider an oligopolistic industry with m identical domestic firms and n identical foreign firms. The marginal costs of the domestic and foreign firms are c^d and c^f respectively. These marginal costs are assumed to be constant, and thus they also represent average variable costs. The domestic and foreign firms compete in the domestic market of a homogeneous good. The inverse demand function for this commodity is given by⁹

$$p = \alpha - \beta D, \quad (12)$$

⁷Using (1) to (3) it can be seen that the government does not accept any contribution at all when $\rho = 1$.

⁸Assuming $A > 0$ we have $A(\cdot) = C(\cdot)$.

⁹The inverse demand function is derived from one specific case of the preferences mentioned in the beginning of this section. That is, $u(y, D) = y + \alpha D - \beta D^2/2$.

where D is the sum of outputs by domestic and foreign firms, i.e.,

$$D = mx^d + nx^f, \quad (13)$$

where x^d and x^f are the output of a domestic and a foreign firm. We examine optimal subsidy levels when the government imposes discriminatory and uniform policies. Profits of a domestic and a foreign firm are respectively given by

$$\pi^d = (p - c^d)x^d + S^d \quad (14)$$

$$\pi^f = (p - c^f)x^f + S^f \quad (15)$$

where S^d and S^f are respectively the lump sum profit subsidies imposed on the domestic and foreign firms, with negative values of S representing taxes.

The number of domestic firms is fixed whereas the number of foreign firms is endogenous.¹⁰ The government can affect the number of foreign firms by changing the values of subsidy level S . It is assumed that the host country is a small one in the market for FDI. Foreign firm moves into (out of) the host country if the profit it makes in the host country, π^f , is larger (smaller) than the reservation profit, $\bar{\pi}$, it can make in the rest of the world. Therefore, the FDI equilibrium provides

$$\pi^f = \bar{\pi}. \quad (16)$$

It is assumed that the domestic and foreign firms behave in a Cournot-Nash fashion. Each firm makes its output decision by taking as given output levels set by other firms, the number of firms, and the subsidy level set by the government. The equilibrium is defined by a three-stage model: first, the government chooses the subsidy level taking everything else as given; in the second stage, the number of foreign firms is determined given the level of subsidy and output levels; finally, output levels are determined.

¹⁰It is not possible to endogenise the numbers of firms in both countries as then one group of firms -the ones with higher marginal costs- will be forced out of the market. One way out could be to relax the assumption that the goods produced by the two group of firms are homogeneous as was done in Lahiri and Ono (1998c).

Using (14) and (15) we find the first order profit maximisation conditions as

$$\beta x^d = (p - c^d), \quad (17)$$

$$\beta x^f = (p - c^f), \quad (18)$$

Using (12) to (18) we find the following closed form solutions

$$\bar{\pi} = \beta(x^f)^2 + S^f \quad (19)$$

$$x^f = \frac{\alpha - c^f - m(c^f - c^d)}{\beta(1 + m + n)} = \frac{\sqrt{\bar{\pi} - S^f}}{\sqrt{\beta}} \quad (20)$$

$$n = \frac{1}{\sqrt{\beta}\sqrt{\bar{\pi} - S^f}} \{\alpha - c^f - m(c^f - c^d)\} - (1 + m) \quad (21)$$

$$p = \sqrt{\beta}\sqrt{\bar{\pi} - S^f} + c^f \quad (22)$$

$$\beta x^d = \sqrt{\beta}\sqrt{\bar{\pi} - S^f} + c^f - c^d \quad (23)$$

We shall now totally differentiate (14) to get¹¹

$$d\pi^d \Big|_{S^d=0} = -\frac{x^d}{x^f} dS^f \quad (24)$$

$$d\pi^d \Big|_{S^d=S^f=S^u} = \frac{1}{x^f} (x^f - x^d) dS^u \quad (25)$$

where S^u stands for the uniform subsidy.¹² Equation (24) states that when only foreign firms are subsidised, the profits of the domestic firms go down. This is because subsidising the foreign firms increases the number of foreign firms, making the market more competitive and thus reducing the profits of the domestic firms. On the other hand, equation (25) together with (20) and (23) reveal that $d\pi^d/ds^u \gtrless 0$ if and only if $c^d \gtrless c^f$. Uniform subsidies will increase the number of foreign firms, and lowers the outputs of both groups of firms. The profits of domestic firms will increase (decrease) as long as it produces less (more) output than a foreign firm does. For this to be the case, domestic firms have to be less (more) efficient than the foreign firms.

¹¹Note that since the profit subsidies do not affect output decisions, the only effects come through the change in the number of foreign firms.

¹²Discriminatory profit subsidies can not be used in favour of domestic firms (i.e., subsidising the domestic firms but not the foreign ones). Such a policy is ineffective since it does not change the domestic output.

We can now define the employment level, E . Taking the variable input costs of the firms to be the income of nationals in the host country, we obtain E as

$$E = c^d m x^d + c^f n x^f. \quad (26)$$

The effect of subsidies on employment can be found by differentiating (26)

$$dE = \frac{1}{2\beta x^f} \{c^f + m(c^f - c^d)\} dS^f \quad (27)$$

where the net effect depends on m and the relative magnitudes of the marginal costs.¹³ It is clear that the effect of a subsidy to the foreign firms on employment is positive (negative) if $c^f \geq c^d$ ($c^f \simeq 0$). Note that as the policy variable is a lump sum profit tax, which does not affect domestic outputs, and the number of domestic firms is exogenous hence, S^d does not affect E .

Next, the effect on consumer surplus can be found by using (11) and (22) as

$$dCS = \frac{D}{2x^f} dS^f. \quad (28)$$

Subsidising the foreign firms brings in more foreign firms, making the market more competitive and thus lowering price¹⁴.

Finally, the total cost of lump sum profit subsidy is defined as

$$TR = S^d m + S^f n. \quad (29)$$

Totally differentiating (29) we get the following general expression

$$dTR = \left[n + \frac{S^f(1+n+m)}{2\beta(x^f)^2} \right] dS^f + m dS^d \quad (30)$$

Needless to say, subsidising foreign and domestic firms increases the total cost of subsidy. So far, it is clear that subsidising the firms has opposing effects on the various components of government's objective function.

¹³More formally, $dE/dS^f > 0$ (< 0) if $c^f > c^d M$ ($c^f < c^d M$) where $M = m/(1+m)$. One can see that $M = [1, 1/2]$ as $m \rightarrow \infty$ and $m = 1$, respectively.

¹⁴Once again, S^d has no effect on consumer's surplus, for the same reason as before.

3 Discriminatory Subsidy and Mergers

Having described the general framework above, we shall begin our analysis with the case when the government uses a discriminatory policy, namely subsidising the foreign firms but not the domestic ones. Substituting (24), (27), (28), (30) in (9) we find

$$2\beta x^f \frac{dG}{dS^f} \Big|_{S^f=S^d=0} = -2\beta x^f x^d m(\rho - 1) - \beta x^f D + x^f c^f \quad (31)$$

As discussed above, subsidising the foreign firms has opposing effects on G through its various components. The above equation reflects this ambiguity. One can see from (31) that $dG/dS^f < 0$ when $\rho \gg 1$. That is, an increase in the subsidy will decrease the government's welfare if the government is sufficiently corrupt. In that case, assuming G to be concave in S^f , the optimal subsidy will be negative. When there is little corruption (i.e., $\rho \simeq 1$),

$$\begin{aligned} 2\beta x^f \frac{dG}{dS^f} \Big|_{S^f=S^d=0}^{\rho \simeq 1} &= -\beta D + c^f \\ &= -(\alpha - 2c^f - \sqrt{\beta\sqrt{\pi}}) \end{aligned} \quad (32)$$

From (32) it is clear that if $c^f \simeq 0$ we have $dG/ds^f < 0$. In the absence of corruption, if the foreign firms are sufficiently efficient the optimal policy is a tax. This is because the efficient firms do not generate much employment and hence, have a small impact on the welfare. Stating the above results formally,

Proposition 1 *In the absence of any policy towards the domestic firms, the optimal lump sum profit subsidy to the foreign firms is (i) negative, if $\rho \gg 1$; (ii) negative if $c^f \simeq 0$ when $\rho \simeq 1$.*

We now consider the effects of the number of lobby members, m , and the degree of corruption, ρ , on the equilibrium levels of both subsidy and contribution payments. The first order condition for the government's maximisation problem for the present case can be derived as

$$G_{S^f}^0 = - \left[2\beta x^f x^d m(\rho - 1) + \beta x^f D + S^f(1 + n + m) - x^f c^f \right] = 0 \quad (33)$$

from which we get

$$G_{S^f m} = -2\beta x^f x^d (\rho - 1) - \beta x^f x^d - S^f \quad (34)$$

Equation (34) shows that when $\rho \gg 1$, we have $dS^{f0}/dm < 0$.¹⁵ A merger of domestic firms (a decrease in the number of domestic firms) increases the level of subsidy for foreign firms if the government is sufficiently corrupt. When the corruption is low (i.e., $\rho \simeq 1$), the first term on the RHS of (34) disappears. Adding and subtracting (βx^{f2}) in (34), and reorganising the result yields

$$G_{S^f m}|_{\rho \simeq 1} = -\bar{\pi} - x^f(x^d - x^f) \quad (35)$$

where $(x^d - x^f = c^f - c^d)$. Then, it follows from the above equation that $G_{S^f m} < 0$ if $c^f \geq c^d$. Therefore, $dS_1^f/dm < 0$ if $c^f \geq c^d$. A merger of domestic firms will lead an honest government to raise the level of subsidy and encourage FDI if the foreign firms are less efficient than the domestic firms. This is because the employment effect dominates all other effects. On the other hand, $G_{S^f m}$ (and thus dS_1^f/dm) is positive if $(c^f < c^d)$ and $\bar{\pi} \simeq 0$. After a merger of domestic firms, the government lowers the level of subsidy for FDI and thus discourages them if there are many efficient foreign firms in the market.

Turning to the equilibrium contribution payment level, using (24) it follows from (34) that $dC^0/dm > 0$ when $\rho \gg 1$.¹⁶ A merger of domestic firms decreases political contribution made by each domestic firm. The smaller the number of domestic firms the less will be the the lobbying activity, which ultimately indicates a lower amount of contribution per head. Stating the above results formally,

Proposition 2 *When the government applies discriminatory lump sum profit subsidy towards FDI, a merger of domestic firms (i) increases the optimal subsidy when $\rho \gg 1$;*

¹⁵To determine the effects on the equilibrium subsidy level, setting dG/dS equal to zero in (9) (using implicit function rule) gives $dS^0/dm = -G_{S^0 m}^0/G_{SS}^0$. For the effects on the contribution levels, we need to differentiate (6) totally to get $dC^0/dm = \pi^d \iota(S^0)(dS^0/dm)$. The above algebra will be used for comparative statics throughout the paper.

¹⁶See the previous footnote.

(ii) increases (decreases) the subsidy if $c^f \geq c^d$ ($c^f < c^d$ and $\bar{\pi} \simeq 0$) when $\rho \simeq 1$; (iii) decreases the political contributions per firm.

4 Uniform Subsidies and Mergers

In this section, we shall analyse the case when the government subsidies both the domestic and foreign firms uniformly. Substituting (25), (27), (28), (30) in (9) we find

$$2\beta x^f \frac{dG}{dS^u} \Big|_{S^f=S^d=S^u=0} = -2m(c^f - c^d)(\rho - 1) - \beta x^f(n + m) + c^f \quad (36)$$

Applying the subsidies uniformly lowers the amount of goods produced by both groups of firms. However, this may still increase the profits of the domestic firms and therefore political contributions. For this to be the case, the domestic firms must be producing less output than the foreign firms, which is the case when domestic producers are less efficient than the foreign firms.

Equation (36) shows that when the government is sufficiently corrupt (i.e., $\rho \gg 1$), $dG/dS^u \lesseqgtr 0$ if $c^f \gtrless c^d$. Recall from the discriminatory subsidy case that when $\rho \gg 1$, lobbying leads to a negative subsidy for FDI. However, here when the government is sufficiently corrupted, lobbying leads to a negative (positive) uniform subsidy if the foreign firms are less (more) efficient than their domestic counterparts. On the other hand, when $\rho \simeq 1$, (36) becomes

$$\begin{aligned} 2\beta x^f \frac{dG}{dS^u} \Big|_{S^f=S^d=S^u=0}^{\rho \simeq 1} &= -\beta x^f(n + m) + c^f \\ &= -[\alpha - 2c^f - m(c^f - c^d) - \sqrt{\beta}\sqrt{\bar{\pi}}] \end{aligned} \quad (37)$$

Clearly, it is a similar result to equation (32). That is, in the absence of corruption, increasing the uniform subsidy decreases the welfare if the foreign firms are sufficiently efficient and thus do not generate much employment. Assuming G to be concave in S^u , the optimal uniform subsidy is a tax. The above results can formally be stated as

Proposition 3 *In the absence of any policy towards the domestic firms, the optimal uniform lump sum profit subsidy is (i) negative (positive), if the foreign firms are less*

(more) efficient than the domestic ones when $\rho \gg 1$; (ii) negative if $c^f \simeq 0$ when $\rho \simeq 1$.

The first order condition for this case can be written as

$$G_{S^u}^0 = -2\beta x^f m(c^f - c^d)(\rho - 1) - \beta x^f D - S^u(1 + n + m) + x^f c^f = 0 \quad (38)$$

from which we get (after some simplification)

$$G_{S^u m} = -x^f(c^f - c^d)(2\rho - 1) - \bar{\pi} \quad (39)$$

Equation (39) states that $dS^u/dm < 0$ if $c^f > c^d$ regardless of the degree of corruption. A merger of domestic firms will increase the level of subsidy if the foreign firms are less efficient. As in the discriminatory subsidy case $dS^u/dm > 0$ if $c^f < c^d$ and $\bar{\pi} \simeq 0$. However, the results here do not depend on the degree of corruption. A merger will lower the uniform subsidy if there are many efficient foreign firms in the market.

Using (25) and (39) we can analyse the equilibrium level of contribution payment. When the lump sum profit subsidies are used uniformly we get $dC^0/dm \geq 0$. Once again, a merger of domestic firms will decrease political contributions per firm. Stating the above results formally,

Proposition 4 *When the government applies uniform lump sum profit subsidies, a merger of domestic firms will (i) increase (decrease) the subsidy if $c^f > c^d$ ($c^f < c^d$ and $\bar{\pi} \simeq 0$), regardless the degree of corruption; (ii) decreases the political contribution per firm.*

5 Conclusion

In this work we develop a partial equilibrium model of FDI. The foreign firms locate themselves in a host country that is small in the international market for FDI. There are also fixed number of domestic firms in the market. The foreign and domestic firms compete under oligopolistic conditions. The government is endowed with lump sum

profit subsidies (taxes) to impose on both groups of firms while facing political pressure from a special interest group representing the domestic firms. Under this structure, the government maximises a weighted sum of the total political contributions from interest groups and aggregate social welfare.

Using the above framework, we determine optimal policies in the presence and absence of lobbying. We found that in the case of discriminatory subsidy for foreign firms, the optimal policy is to tax FDI when the government receives political contributions from the domestic firms. In the case of uniform subsidies, when the government is corrupted we show that the optimal subsidy depends on the relative efficiency of both group of firms. In particular, we found that the optimal uniform lump sum profit subsidy is negative, if the foreign firms are less (more) efficient than the domestic ones.

In the absence of lobbying, the government is only concerned with maximising the aggregate social welfare. The effects of subsidising FDI on the welfare of the host country are as follows. Firstly, there is a reduction in price through the increasing competition caused by the entry of foreign firms. The second one is the reduction in domestic profits due to FDI. Thirdly, there is the employment effect generated by the foreign firms, and finally the cost of subsidy. We show that the optimal subsidy whether it is discriminatory or uniform depends mainly on the foreign firms marginal (and average) costs. That is, the optimal subsidy is negative if the marginal costs of the foreign firms is sufficiently small, suggesting that the foreign firms are efficient and do not generate much employment in the host country.

We also analyse how the mergers of domestic firms change the equilibrium levels of subsidies and contribution payments. Our results show that, in the presence of lobbying, a merger of domestic firms increases the discriminatory subsidy towards FDI, and increases (decreases) the uniform subsidy if the foreign firms are less (more) efficient than the domestic firms.

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