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CSR in an oligopoly with foreign competition: Policy and welfare implications

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ABSTRACT

This paper is concerned with the increasingly active role of governments in shaping and promoting corporate social responsibility (CSR). Introducing the cost of taxation into a governmental decision-making framework, the paper elucidates probable strategic substitutes and complements between CSR promotion and import tariffs, based on a welfare analysis. It shows that there exists an optimal degree of promotion for CSR and an optimal tariff rate imposed on foreign firms, but only if the cost of taxation is relatively low. In particular, it finds that this cost should be kept to a low level in countries that wish to enlarge consumer-oriented CSR initiatives and attract foreign exports.

1. Introduction

CSR typically attempts to follow the axiom: enough granaries to support the creation of high etiquette, ample food and clothing to give people time to understand honor and to be aware of what is disgrace. It was once argued that a corporation's sole responsibility is to provide the maximum financial return to its shareholders. It soon became apparent, however, that the pursuit of financial gain needed to take place within boundaries set by the laws of the land (Carroll, 1991), and that companies were urged to meet the increasing stakeholder demands and pressures (Clarkson, 1995). As a consequence, more and more enterprises are gradually being forced to pursue a corporate self-discipline that takes more into account than profits, i.e., that regards ethical issues and community welfare as important for policy making.

Economic literature on CSR is a relatively recent phenomenon, and most of them have been confined to an examination of CSR on a voluntary basis. Goering (2007) incorporated CSR into a mixed oligopoly, wherein private not-for-profit organizations (NPOs) are considered to be maximizing an objective function that takes into account their own profits as well as a share of consumer surplus.[1] Kopel and Brand (2012) extended this framework, working the endogenous hiring decisions of socially responsible firms into it. There have been several other contributions to various aspects of issues in CSR, in horizontal models (Goering, 2008; Matsumura and Ogawa, 2014; Lambertini and Tampieri, 2015; Lambertini et al., 2016; Liu et al., 2015), in vertical models (Goering, 2012, 2014; Brand and Grothe, 2015), and in open economies (Wang et al., 2012; Chang et al., 2014; Chao et al., 2016).

Reviewing the history of CSR development, however, CSR efforts emerged not because of their completely voluntary, but rather out of a variety of social, environmental, and economic pressures (European Commission, 2001). Especially in recent years, bearing in mind their shared purpose of fostering CSR and sustainable development as a supplement to traditional hard-law regulations, many governments,

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[1] In contrast to traditional mixed oligopolies, Goering (2007) expected private NPOs to maximize return to stakeholders rather than to engage in social welfare, which was the objective the public firms reported in De Fraja and Delbono (1989), Nett (1993), and other studies were endowed with.

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particularly in Europe, have taken positive actions to shape and promote CSR (Albareda et al., 2007), such CSR strategies are intended to improve social provisions and services but lead away from hierarchical regulation, assuming uniquely soft characteristics (Steurer, 2010).[2] To be specific, in some industries like the food and drug industry, governments generally establish binding minimum standards to assure product quality and safety, with which all firms must comply. Beyond that, governments always choose other moderate measures to stimulate companies to better integrate social and environmental concerns into business routines.[3] Ambitious policies provide clear points of orientation, companies would be more active with regard to socially responsible behaviors (Barth et al., 2007). Thus, CSR is not only a feature of the new global corporation but also of new societal governance (Moon, 2007), namely, it has matured into a new thematic area of political activity. Based on the above observations, this paper complements the existing literature, emphasizing the role of government in CSR and examining the policy and welfare implications.

As the world's economic landscape increasingly moves toward greater trade liberalization, imports have become another pathway to ensure domestic supply. The degree of CSR promotion and the tariff rates are adjustment instruments for domestic outputs and foreign exports, respectively: can there be any strategic substitution or supplementation between them? Although several studies have demonstrated that consumer-oriented CSR initiatives influence governments' decisions on tariff rates (Wang et al., 2012; Chang et al., 2014; Chao et al., 2016), this paper extends their results in the following three directions. First, it endogenizes the CSR initiatives of domestic firms on the side of the government. We analyze the trade-offs in governments' balancing of CSR strategies and tariff policies instead of looking one way only at their reactions to corporations' CSR initiatives. Second, as companies respond differently to similar pressures due to different corporate cultures, values, structures and strategies, government policies does not influence them symmetrically (Post et al., 2002).[4] To mimic the real-world economy, this paper distinguishes two types of companies in accordance with different reactions to CSR promotion led by the government. Third and finally, this report contains a modification of the formulation for the cost of taxation. Tariff collection requires both taxpayer and stakeholder participation in the process of implementation, inevitably producing measurable costs such as staff salaries, office expenses, equipment outlay, and even corruption. Thus, a distortionary effect occurs, in that tariffs are needed to cover governments' deficits or public expenditures,[5] that is, tariff revenue yields a deadweight loss,[6] so the shadow cost of tariff revenue λ is considered in our model.[7]

Working from abundant practical observations and the existing literature, this paper examines the interactive relationship between CSR strategies and tariff policies introducing the cost of taxation into the governmental decision-making framework. We find that an optimal degree of CSR promotion and an optimal tariff rate only exist when the cost of taxation is relatively low. Moreover, in stark contrast to the existing literature, our analyses show that the government must utilize diverse strategies and balance trade-offs among consumer surpluses, industrial profit, and tariff revenues, depending on the cost of taxation. In particular, only with a low cost of taxation can a country effectively enlarge CSR behaviors and open its doors to foreign firms, whereas a large cost of taxation could cause a commodity shortage.

The rest of this paper is organized as follows. In Section 2, the basic model is presented. In Section 3, equilibrium results and comparisons are provided. In Section 4, the endogenous choices of the degree of CSR promotion and the tariff rates are examined. Section 5 concludes the paper.

2. The basic model

Consider an oligopoly market in which two domestic firms (in equations as firm 0 and firm 1) competes with a foreign private firm (firm 2). All of the firms provide a homogeneous good to the domestic market and move simultaneously as Cournot players. The linear (inverse) demand function is specified as $p = 1 - \sum_{i=0}^{2} q_i,\ i = 0, 1, 2,$ where q_i denote the output of firm i. Assume all firms use an identical technology and have increasing marginal cost function: $C(q_i) = \frac{1}{2}q_i^2$.

Governmental promotion produces incentives or pressures on CSR initiatives, under which we assume that domestic firms choose to maximize the weighted sum of their own profits and consumer surplus to make reactions[8]:

$$\max V_i = \pi_i + \alpha_i CS, \quad i = 0, 1 \tag{1}$$

where $\pi_i = pq_i - \frac{1}{2}q_i^2$ denotes profits; $CS = \frac{1}{2}(q_0 + q_1 + q_2)^2$ denotes total consumer surplus; and $\alpha_i \in [0, 1]$ indicates the weight assigned to consumer surplus. In order to distinguish different reactions of domestic firms under governmental CSR promotion, and for reasons of analytical tractability and without loss of generality, given the degree of CSR promotion is α, we assume firm 0 conforms to it completely, i.e., $\alpha_0 = \alpha$; in contrast, firm 1 cannot respond to it at all, i.e., $\alpha_1 = 0$. Here we still use the terminology of the previous literature, calling them “consumer-friendly firm” and “private firm”, respectively.

A specific tariff t per unit is assumed to be imposed on the foreign firm's output. The objective function of the foreign firm is hereby obtained as:

$$\pi_2 = pq_2 - \frac{1}{2}\, q_2^2 - tq_2. \tag{2}$$

As previously mentioned, the role of the cost of taxation is carefully considered. We assume that the payoff to the government is social welfare, defined as:

$$SW = CS + \pi_0 + \pi_1 + (1 - \lambda)T, \tag{3}$$

where $T = tq_2$ denotes the tariff revenues levied on foreign firms; the parameter $\lambda \in [0, 1]$ captures the distortion of taxation or the shadow cost of tariff revenue.

[2] The UK government stated on its website: “The base level of responsible behavior for any organization is legal compliance and the Government has a role to play in setting standards in areas such as environmental protection, health & safety and employment rights. The Government can also provide a policy and institutional framework that stimulates companies to raise their performance [voluntarily] beyond minimum legal standards. Our approach is to encourage and incentivize the adoption of Corporate Social Responsibility, through best practice guidance, and, where appropriate, intelligent [i.e. soft-law] regulation and fiscal incentives.” See more details at http://www.csr.gov.uk/policy.shtml.

[3] Steurer (2010) proposed some soft measures including raising awareness and building capacities for CSR, improving disclosure and transparency, facilitating socially responsible investment and so on. In this paper, “social and environmental concerns” is a depiction of behavior that the firm is likely to expand production to improve consumer surplus.

[4] For example, because of the political relevance, state-owned enterprises are more susceptible to government policies than private firms. Similarly, because of the information disclosure and transparency, listed companies are more susceptible to government policies than unlisted companies.

[5] Consider that the subsidies must be financed by distortionary taxes while a public firm's profit and tariff revenues can be earmarked for subsidies. Capuano and De Feo (2010) and Matsumura and Tomaru (2013) assumed an additional cost of bearing deficits in public firms. We, however, suppose that a government's deficit derives from the cost of engaging in tax-revenue activities, rather than subsidies.

[6] Taking the cost of taxation into account relaxes the common assumption that each extra dollar earned in profits has the same social valuation as an extra dollar in tax revenue collected by the government.

[7] This paper picks up a strand of the mixed oligopoly literature examining the desirability of privatization (e.g., Matsumura, 1998; Pal and White, 1998). Despite the difference in research themes between our work and others', we extend their results, considering the cost of taxation as well.

[8] A similar specification had been adopted by Goering (2007) and Brand and Grothe (2015), in which they regarded α_i as the degree of concern over consumer surplus voluntarily, rather than a reaction to, or a reflection of governmental promotion.