



# Lobbying and the power of multinational firms

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## ABSTRACT

Can multinational firms exert more power than national firms by influencing politics through lobbying? To answer this question, we analyze the extent of national environmental regulation when policy is determined in a lobbying game between a government and a firm. We compare the resulting equilibrium regulation levels, outputs and welfare in a game with a multinational firm with those in an otherwise identical game with a national firm. For low transportation costs, output and pollution of a national firm are always as least as high as for a multinational; this changes for high transportation costs and intermediate damage parameters. When there is no lobbying, welfare levels are always higher with multinationals than with national firms. However, the existence of lobbying may reverse this ordering.

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## 1. Introduction

Even though global foreign direct investment has faced two major negative shocks since the turn of the century, the stock of foreign capital in most countries is much higher than several decades ago. Some authors argue that the influence of lobbying on the political process has grown due to this aspect of globalization. This perception sometimes culminates in the notion of the 'loss of sovereignty' of the nation state. According to this view, national governments lose their discretion to set policy, e.g. environmental regulation, because multinational enterprises have a better lobbying position vis-à-vis governments than national firms: the former can relocate in response to unwanted policies, and governments that want to avoid such relocation must succumb to the wishes of the multinationals. In this fashion, a race to the bottom ensues when multinational firms are important, leading to 'pollution havens' with excessively lax regulation to attract multinational firms. Contrasting this view is the 'not-in-my-backyard' (NIMBY) story: If pollution causes high damages, governments may set inefficiently high pollution standards to deter polluting multinationals.

Such motivated, we ask whether the growing importance of multinational firms indeed leads to harmful policy biases and, in particular, whether it leads to lax pollution regulation. We focus on a small country that has to take environmental regulation in the rest of the world as given. Our framework applies to the interaction of industrialized countries with transition economies and

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LDCs, or to cases where some industrialized countries decide to introduce stricter environmental regulation than others due to national preferences.<sup>1</sup>

We analyze how such countries set their regulation when they face a footloose (“multinational”) monopolist that can choose where to set up its production facilities. The monopolist can engage in lobbying activities to influence regulation. To bring out the role of a footloose firm’s ability to freely choose locations, we compare the outcome with the one that would emerge with a “national” monopolist that is restricted to produce in its home country. While there is no general result that multinational firms are regulated more or less heavily than national firms, we can determine the circumstances under which each case emerges.

More specifically, we consider a stylized three-stage game.<sup>2</sup> In period 1, the small-country regulator who maximizes political support chooses the level of a pollution standard that raises unit costs. In period 2, the monopolist chooses between three options: produce exclusively from the home country (“no relocation”), open a plant in the foreign country as well (“partial relocation”), close down production in the small country altogether (“complete relocation”). In period 3, the monopolist chooses quantities on the two markets. International trade is allowed, but subject to trade or transportation costs.

We determine all equilibria of the game. Our central results ([Propositions 1 and 2](#)) provide a complete characterization of the equilibrium regulation and the resulting location patterns for the multinational firm as a function of the main parameters (environmental damage, transportation costs and the weight of the firm in the political support function). If the firm weight increases and potential environmental damages decrease, regulation changes in such a way that the equilibrium moves from relocation to partial relocation and finally to no relocation. For very low transportation costs, regulation induces complete relocation (with imports from the foreign country), whereas, for high transportation costs, it induces only partial relocation (where both markets are served locally).

We use the equilibrium characterization to illustrate how the regulation of multinational and national firms differs, and how lobbying affects the difference. As a first benchmark case, we follow the related literature (see [Markusen et al., 1995](#); [Rauscher, 1995](#)) and assume that the regulator applies a consumer standard. Thus she cares only about consumer surplus and environmental damage, not about producer surplus – in particular, her behavior is not affected by lobbying.

In this benchmark case, whether the national or multinational firm produces and pollutes more in the home country depends on transportation costs and the environmental damage parameter. For sufficiently low transportation costs, the output of the national firm is never lower than the home country output of the multinational firm, and for wide parameter ranges the output of the national firm is higher. For high transportation costs, the picture is reversed when environmental damages are at intermediate levels: The multinational firm produces and pollutes more in the small country than the national firm.<sup>3</sup> Nevertheless, in the benchmark case without firm influence consumers are always better off with multinational firms than with national firms: Welfare, defined as consumer surplus minus environmental damages is always higher.

With a positive weight of producer surplus in the regulator’s objective function, this no longer is true. It is straightforward that lobbying leads to weaker regulation with national as well as multinational firms. More surprisingly, there are two striking results. First, the parameter region where the multinational produces higher output and pollution corresponds to higher values of the equilibrium damage parameters, that is, to more damaging pollution. Second, for more dangerous pollutants and sufficiently high transportation costs, welfare can be lower with a multinational firm than with a national firm when the profit weight is sufficiently high.

In the main text, we analyze a monopoly model with specific functional forms for demand, costs, environmental damage and the type of regulation. In [Appendix A](#), we then derive the most important insights of the specific model in a more general set-up. It turns out that neither the specific functional forms nor the assumption of monopoly markets are necessary for the main results.

After a discussion of related literature in [Section 2](#), [Section 3](#) describes the model. [Section 4](#) derives the locational choices of firms for given regulation levels. In [Section 5](#), we characterize regulation for national and multinational firms, respectively. [Section 6](#) compares regulation levels in the two cases, and it shows how lobbying affects the comparison. [Section 7](#) deals with welfare issues. In [Section 8](#), we discuss the robustness of our results, in particular, by reference to the more general model analyzed in [Appendix A](#). [Section 9](#) concludes.

## 2. Related literature

Our paper combines two strands of literature.

First, it belongs to the vast literature on lobbying. [Hillman \(1989\)](#) and [Grossman and Helpman \(2002\)](#) provide surveys of different lobbying approaches and how they are interrelated.<sup>4</sup> In our model, the regulator maximizes a weighted average of consumer and producer surplus. In this respect, the paper builds from the political support function approach ([Peltzman, 1976](#)).<sup>5</sup>

<sup>1</sup> For instance, in contrast to European countries and Australia, the United States never ratified the Kyoto Protocol and Canada recently withdrew from it for fears of unemployment and negative economic effects. Also, countries follow divergent national regulatory approaches towards the use of nuclear energy. Regulation in France is rather lax and allows for exports to third countries, whereas Germany’s approach has traditionally been stricter, culminating in the recent decision to phase out nuclear energy production.

<sup>2</sup> The underlying location game is related to [Motta and Thisse \(1994\)](#) and [Markusen et al. \(1993, 1995\)](#); see [Section 2](#) for more details.

<sup>3</sup> Essentially, imposing strict regulation has greater environmental benefits with a national firm than with a multinational firm. For high transportation costs, the multinational firm does not export to the foreign country, so that regulation only affects pollution resulting from production for the home country. For the national firm, however, regulation also curbs pollution resulting from exports to the foreign country.

<sup>4</sup> [Potters and Sloof \(1996\)](#) provide a survey with an empirical focus.

<sup>5</sup> As shown for instance by [Grossman and Helpman \(1994\)](#) such a regulatory behavior can result from a lobbying game in which interest groups offer contribution payments to an incumbent government. The government deviates from the welfare maximizing policy in exchange for contributions.

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