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Title: Getting Polluters to Tell the Truth
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Marcelo Caffera
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Dear Professor Caffera:

Our review of your manuscript is now complete. Two individuals reviewed the manuscript and their detailed comments are attached.

The reviewers' assessment of the paper is quite mixed. One reviewer finds the paper to be well written and the analysis to be well executed. But both reviewers have significant concerns about the assumptions underlying the model and the robustness of the results derived. I summarize their main concerns below.

Reviewer 1 questions the two assumptions that distinguish your model from earlier work on the same topic. He argues that it is unlikely that two firms, even in the same industry, would have identical abatement cost functions, given that abatement costs are properly captured by the difference in a firm's profits with and without abatement. The reviewer also questions the plausibility of the assumption that an audit can reveal a firm's cost function perfectly.

Reviewer 2 also focuses attention on the assumption of identical costs and argues that given this assumption the possibility of collusion must be considered. This reviewer suggests that the paper's main result is similar in spirit to that derived in a different context by Cremer and MacLean.

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My own reading of the paper leads me to concur with the reviewers' main concerns. In particular, I think the conception of abatement costs assumed in the paper is a very narrow, engineering-oriented one. Abatement costs cannot be viewed solely as the costs of installing and operating a specific type of production equipment or pollution treatment equipment. Pollution can also be abated by reducing output, switching inputs, and recycling (among other possibilities). As Reviewer 1 points out, abatement costs therefore correspond to the difference in profits when there is no abatement and when there is abatement. It is questionable whether one can reasonably assume that the regulator can identify which firms have identical abatement costs, and group them accordingly.

Like Reviewer 1, I also think that it is implausible to assume that an audit can reveal a firm's abatement cost function perfectly. Regulators do collect a fair bit of information about firms, as you observe, but I think it is a stretch to claim that they can identify a firm's abatement cost function perfectly.   [You state that in the U.S. under the NPDES system, regulators collect detailed cost information. This is a feature of the NPDES that I am unfamiliar with, and it should be substantiated.]

It would perhaps be easier to overlook the limited plausibility of the two central assumptions if the paper did not claim that the mechanism it proposes distinguishes itself from earlier ones by being practicable and very similar to mechanisms currently in place. A reader familiar with the difficulties in designing environmental policies is unlikely to be convinced of the mechanism's practicability or its similarity to existing policies.

Given the above concerns, and the fact that *JEEM* can publish only a small fraction of the papers submitted to it, I must unfortunately decline the opportunity to publish your paper.

I appreciate the opportunity to review your work, and I hope you will continue to consider *JEEM* as a publication outlet for your future research.

Sincerely,

Arun S. Malik