

## **Environmental violations, optimal deterrence, and reputational costs**

Center for Environmental Justice and Sustainability  
Mid-year report

Eric Wehrly  
Department of Finance  
Albers School of Business and Economics

### **Project:**

Do firms that pollute the environment hurt their reputations? Many researchers believe they do. However, the literature has yet to produce convincing evidence that environmental violations result in reputational penalties. This research project examines environmental violations by public corporations, the legal penalties associated with these violations, and importantly, also investigates whether environmental violations by firms carry a meaningful reputational penalty. Reputational penalties are market sanctions that impose significant costs on firms that violate environmental regulations; they are market value losses beyond the expected legal penalties. That is, these costs are separate from any fines or remediation costs ultimately levied on the firm by courts or regulators.

### **Activities and progress to date:**

There are no data sets available to analyze my research questions, so the data must be hand collected by searching for news events in major newspapers. A team of three student research assistants and I have gathered data on events from articles dated January 2000 through the present day. So far we have several hundred news events involving over one hundred public companies. Using a categorization document I drafted late last year, we have also coded perhaps 2/3 of these events, converting each news item into a detailed data point containing two dozen characteristics, including facts like the company name, the type of environmental harm or pollution, nature of the allegation or lawsuit, who filed the suit, fines and remediation costs assessed, etc. I have extensively reviewed the literature over the last year, and have written a portion of the literature review. This process has confirmed that our research question is a timely one, and not yet adequately addressed.

On March 7, 2016, I also presented my work-in-progress at a CEJS Social Event held at the Lemieux Library, and received much good feedback and ideas for future research directions. For example, in our data search we note many instances where municipalities are the offending polluters, and indeed participants in the forum were interested in pollution events concerning municipalities and governmental entities. Because these entities do not have a stock price, which is necessary for estimating market reputational penalties, we cannot include these events in our data. However, an interesting

conversation with one of the attendees after my presentation provoked an elegant idea to work around this obstacle. I am grateful for interdisciplinary forums like CEJS events that create opportunities to learn from colleagues across the university.

**Plans for the remainder of the year:**

Because the data collection has taken longer than expected, we are a bit behind the original schedule. After the news events are completely coded into data, stock return data must be collected and merged with this dataset; this will likely take us well into June 2016. Econometric analysis of the data and table generation are targeted for July or August 2016 completion, and results will be written up shortly thereafter. A first draft of the paper is targeted for September or October 2016, and the manuscript will be circulated for comments to my colleagues and via presentation at conferences. I anticipate submission to a journal by year-end 2016 or the beginning of the following year.

Ultimately, this research will inform policy decisions by providing evidence concerning reputational penalties, legal penalties, and criminal and civil judgments against firms that pollute the environment or otherwise violate environmental laws. Along the way it will also provide large-sample estimates of the share valuation impact on firms that violate environmental regulations. Lastly, it will examine the sizes of the legal penalties imposed on violating firms, and their relation to the type of environmental harm. The results should be useful for regulators, educators, and others with a stake in optimal environmental protection. This project should find eventual publication in an environmental economics, corporate responsibility, finance, or business ethics journal.