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REGULATION

Requiring Companies to Disclose Climate Risks Helps Everyone

by Matthew E. Kahn
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In the movie *Forrest Gump*, the protagonist becomes a very rich man due to a natural disaster and its unforeseen business consequences. When he first enters the shrimp boating business, Forrest catches no shrimp. His fortunes change when a hurricane strikes and his boat is the only one to survive the disaster. Facing no competition, he becomes a multimillionaire.

It's a funny scene, and it illustrates an economic truth: Businesses are often unprepared for environmental disaster. Policy makers have recognized as much, and in recent years the U.S. Securities and Exchange Commission (SEC) has taken actions to force companies to disclose climate change–related risks. The Trump administration has threatened to roll back those requirements, which would hurt companies, investors, and consumers.

Over 20 years ago, Harvard Business School professor Michael Porter introduced the Porter hypothesis, which posits that environmental regulation can benefit companies by nudging them to explore their current production methods and eliminate

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costly waste that they have been blissfully unaware of. Nobel laureate Herbert Simon's model of bounded rationality in decision making explains how this could work. In Simon's model, decision makers face costs when taking an action, and this makes them stick to "business as usual." In such a case, a firm's leadership may respond sluggishly to evolving risks. If that's true, a strong nudge by government could encourage such a company to change its ways, resulting in better environmental and financial performance.

The SEC has recognized this point; in 2010 it issued a planning document asking publicly traded companies to disclose their climate exposure risk. The Bank of England's Mark Carney has also been stressing the importance of addressing these issues.

President Trump's pick for SEC chair, Jay Clayton, has advised clients to disclose climate-related risks. But given the administration's general deregulatory bent and refusal to recognize the existence of climate change, the fate of the climate disclosure requirement suddenly appears less than certain. If major corporations are not prepared for emerging climate risks, then the country's economic performance could suffer during times of extreme climate shocks. In contrast, if companies are required to disclose their climate risk exposure, as the SEC had planned, then this discovery process would be reflected in asset prices, which would incentivize companies to build up their climate resilience. This optimistic claim represents a restatement of the original Porter hypothesis, and there is empirical evidence to support it.

A recent industry case study suggests that investors have been unaware of how past climate shocks affect corporate profitability. Consider an investment strategy where you short stocks in the food sector during times of drought and purchase food stocks during times of heavy rain. A recent NBER working paper documents that from 1985 to 2014 this trading strategy would have yielded a large annualized average rate of return of 9.2%. Why? The food sector's profitability is negatively correlated with drought because agricultural output hinges on climate conditions. Given that future drought conditions can be predicted using current information, adherents of the efficient markets hypothesis should be surprised that investors did not see these patterns and invest accordingly.

The SEC's proposed rules require firms to go through a process of "self-discovery" to learn about what new risks they face. For firms that have already gone through this process privately, the regulation will not lead to new information for the firms themselves, but by having to disclose the information, shareholders and potential investors will be better informed. This will create more market accountability and will incentivize such firms to hire environmental and logistics consultants to offer solutions that reduce the firm's risk exposure. Such consultants might suggest strategies such as having contingent backup supply chains — for example, what steps can be taken to guarantee that Starbucks doesn't run out of coffee beans for a month? Geographic locations could be ranked by their climate resilience so that a company like Google does not keep its servers in a place that is at risk of extreme disasters.

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As a public goods provider, the government can play a useful role in nudging companies to disclose such information, thus drawing investors' attention to it. Disclosure requirements can also help firms whose leaders do not know what they do not know, in terms of the new climate risks they face. Such firms are less likely to have evaluated their evolving risk exposure. If President Trump enforces the existing SEC regulation and encourages the introduction of penalties for not making such announcements, then this subset of companies will learn about the new risks they face and will recognize that the public disclosure of this information will hold them accountable.

Different companies will learn about different risks. Some may learn that their current headquarters faces a flood risk, while others may learn about their exposure to much higher electricity bills due to dynamic pricing or power blackout risk at factories in the developing world. Some may learn about transport logistics risks such as not being able to send big ships down the Mississippi River because of drought.

The net effect of these disclosures will be that firms increasingly invest in resilience in order to claim that they are making progress in limiting their risk exposure. As these firms demand new solutions to their challenges, new entrepreneurs will appear to supply them. In this sense, the SEC disclosure rules will help to accelerate adaptation so that fewer sectors will be vulnerable to extreme weather events.

Matthew E. Kahn is a Professor of Economics and Spatial Sciences at the University of Southern California. He is the author, most recently, of *Climatopolis*.

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