

Necessity as the mother of "green" inventions

IESE's Pascual Berrone explore the impact of regulatory and normative pressures on the emergence of solutions to reduce environmental harm.

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In recent years, firms have been increasingly scrutinized for wrongdoing concerning the environment.

Investors discount share prices of polluting companies, governments introduce policies that place a cost on emissions, and consumers consider a company's environmental philosophy when purchasing products and services.

A possible response to these mounting pressures is environmental innovation — the development of products, processes and services aimed at reducing environmental harm.

In comparison with other practices, environmental innovation is riskier and requires greater financial commitment. But in the long term it usually accrues returns.

IESE's [Pascual Berrone](#), along with Andrea Fosfuri, Liliana Gelabert and Luis R. Gomez-Mejia, studied the impact of institutional pressures on firms' environmental innovation in the paper "[Necessity as the Mother of 'Green' Inventions: Institutional Pressures and Environmental Innovations](#)," which was published in the *Strategic Management Journal*.

Why firms innovate

Unlike other practices oriented toward meeting minimal environmental standards, environmental innovation emphasizes pollution prevention.

It concerns the invention of new designs, and the creation of new products and processes, to reduce or eliminate the use and generation of hazardous substances.

Hence, environmental innovation has important externalities because it can lead to a cleaner and safer world.

Some argue that it is a source of competitive advantage because it is potentially valuable to the firm's consumers and other major stakeholders.

While there is consensus on the value of environmental innovation, at least from a social perspective, little is known about why some firms engage in more environmental innovation than others, and under what conditions firms pursue this innovation.

The authors give two main reasons for this.

1. *Regulatory Pressures*. These are typically exerted by governments that have the power to recognize or deny the organization's existence within their jurisdiction. Given the government's power, non-compliance with regulation can be costly to the firm.

Greater acquiescence could shelter the firm from political risks and legal coercion, particularly when the potentially offensive behaviors, such as the release of toxic chemicals, involve high social costs.

Innovation, in this case, is typically geared toward meeting targets for environmental improvements in terms of pollution and emissions.

2. *Normative Pressures*. These typically come from professional organizations and other social actors, which define appropriate behavior and standards for group members.

These norms are related to the issue of legitimacy. In their quest for legitimacy, organizations compare themselves with their peers and try to behave in accordance with standards prevalent among members that share the same institutional field.

In this regard, NGOs play a key role by creating voluntary standards that push firms beyond minimum regulatory requirements, mobilizing resources and exercising their voice.

As such, the presence and activities of environmental NGOs around a company's facilities are likely to increase the pressures felt by the firm, leading it to comply with those standards.

No need to wait till pressured

The research team used a large sample of firms belonging to the most polluting sectors, and examined environmental patents from the period studied, to show how regulation affected innovation.

Their findings suggest that external influences may inspire managers to develop unique resources.

Furthermore, they found that managers in firms whose reputations have suffered from environmental misconduct or compliance problems might be more sensitive to pressure from regulators and institutions than managers in other companies.

External pressures for more corporate responsibility require environmental strategies to conform to institutional demands, ensure societal legitimacy and secure organizational success.

Given that a firm's competitive advantage depends on its ability to innovate in ways that its rivals cannot easily imitate, environmental innovation appears to be a valuable policy for managers to follow.

However, the implication that managers need to wait for criticism before developing environmental innovation is wrong. They can and should take the lead on this type of activity, since it should have a positive effect on firm performance.

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