The "Chemical Spillover" effect: Are polluters "intoxicating" clean organizations?

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Motivation

Inefficient users of **toxic chemicals** are punished (King and Lenox, 2002)

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Better off using toxic chemicals that are **inefficiently** handled by others

Firms diversify into industries with same **chemicals** (Diestre and Rajagopalan, 2010).

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Better off using toxic chemicals that are **broadly** used across activities

Better off using toxic chemicals that are broadly and inefficiently handled by others….really?

"Chemical Spillover" Effect

- Existence of a **chemical-level reputation** (Hoffman and Ocasio, 2001)
- **Information asymmetry** of the risks of that chemical and how safely firms handle it (Barnett and King, 2008)
- Stakeholders' ability to **administer common sanctions** to all users of the same toxic chemical (King, Lenox, and Barnett, 2002)

Hypothesis 1: Firms using a given toxic chemical are punished after somebody else's accident with that chemical.

Chemical's Illegitimacy

Strength of the proposed mechanisms will be enhanced by chemical's **illegitimacy:**

- *Chemical reputation:* worse for illegitimate chemicals (Hoffman and Ocasio, 2001)
- *Stakeholders' sanctions*: stronger for illegitimate chemicals (Eesley and Lenox, 2006)

Hypothesis 2: The illegitimacy of the toxic chemical increases the strength of the "chemical spillover" effect

Chemical-level Association

Strength of the proposed mechanisms will be reduced by the presence of **chemical-level associations** (Barnett and King, 2008)

- CLAs reduce the existing *information asymmetry* (Slovik and Weber, 2002)
- CLAs reduce the likelihood and strength of *stakeholders' sanctions* (Baron, 1995)

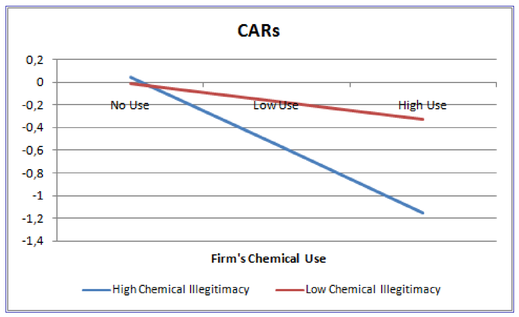
Hypothesis 3: The presence of a chemical-level association reduces the strength of the "chemical spillover" effect

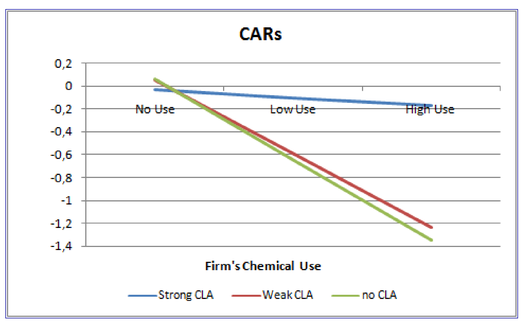
DATA & SAMPLE

- Environmental accidents : Content analysis → 81 accidents with specific toxic chemicals between 1995 and 2005
- Firms' emissions of specific toxic chemicals: Environmental protection Agency's (EPA) Toxic Release Inventory
- Stock price daily variations: Center for Research on Security Prices (CRSP)
- Final sample: 181 "innocent" firms across 81 accidents → 15147 observations

METHODS-RESULTS

CONSTRUCT	MEASURE
Dependent Variable	CARs days 0 to5
Firm's Chemical Use	Toxic chemical releases (toxicity-weighted)
Chemical Illegitmacy	Chemical's appearances in Greenpeace scientific reports
Chemical-level Association	Presence & Services provided





CONTRIBUTION

Environmental management

- Potential costs of focusing on toxic chemicals that are broadly and inefficiently used by others

Environmental Stakeholder literature

- Impose common sanctions to users of same chemicals, yet these are not necessarily driven by real toxicty

Self-regulation research

- CLAs arise to solve a commons problem arsing from a shared chemical reputation