What do we know about effective enforcement?

June 1, 2015

Jay P. Shimshack
University of Virginia
Frank Batten School of Leadership and Public Policy
What do we know? The big picture

• The basic insights of the Becker (1968) “economics of crime” model explain a lot of real world behavior.
  – In this model, regulated entities weigh the expected benefits of a violation with the expected penalties of a violation.
  – Expected penalties are a function of (1) beliefs about the probability of detection and (2) the size of the penalty conditional on a detected violation.

• Within the rational actor paradigm, monitoring and enforcement achieve policy objectives via:
  – A direct reduction in the penalized harm itself.
  – A specific deterrence effect.
  – A general deterrence effect.
  – A beyond compliance effect.
What do we know? The big picture

• Nearly all studies that take causality seriously find at least small specific deterrence effects from enforcement.
• Nearly all studies of general deterrence effects find that enforcement actions levied towards one facility spillover to affect the behavior of other similar facilities.
• Rule changes increasing inspection probabilities, sanction probabilities, or sanction magnitudes are often associated with greater overall compliance.
• Enforcement has been found to encourage both compliance and beyond compliance behavior.
• All results are found in settings where compliance is low and in settings where compliance is high.

→ Traditional monitoring and enforcement actions get results.
What do we know? Details and implications

• *Perceived* monitoring and enforcement frequency and intensity influence compliance behavior more than *actual* monitoring and enforcement intensity.

• Regulated entities tend to misperceive the probability of inspection, often thinking it is higher than it actually is.

  → Monitoring frequencies should not always be publicized and/or regularized.

• Although greater inspection frequencies lead to greater compliance, they typically do so at a diminishing rate.

  → More inspections are not always more cost effective than fewer inspections.
What do we know? Details and implications

• Informal enforcement actions without “teeth” generally have little to no impact on compliance outcomes.

• In contrast, formal enforcement actions (and especially fines) typically lead to greater compliance.

→ Formal enforcement and real penalties are essential.

• While higher formal penalties enhance compliance, they often do so at a diminishing rate.

→ Empirical research suggests more frequent penalties may spur more overall deterrence than a few large penalties.
What do we know? Details and implications

• Enforcement actions at one facility appear most likely to spillover to affect behavior at other facilities when:
  – Facilities are similar (jurisdiction, size, potential harm, industry, etc.).
  – Facilities are linked in product markets (Evans and Gilpatric WP 2014).

→ Enforcement spillovers are often large, but their ‘reach’ is limited (and incompletely understood).

• Spillover effects of enforcement are maximized when randomness across space and time plays a key role.

→ Enforcement targeting can improve efficiency, but too much targeting may degrade effectiveness & efficiency.
Going beyond the basic model

• Enforcement frequency and severity DO MATTER in ways predicted by rational actor models.
• But, it is difficult to explain the high levels of observed compliance in many settings with the simplest “economics of crime” model alone.
  → Factors beyond the probability of detection and the size of the penalty alone motivate compliance.
• What else affects compliance & pro-social behavior?
  – Non-regulatory incentives, including input market pressures, output market pressures, and activist pressures
  – Compliance Assistance & Reductions in Regulatory Complexity
  – Social Norms and Perceptions of “Fairness”
Implications of going beyond the basic model

→ Noncompliance and penalties should be well publicized.
  - The spillover effects underlying general deterrence require that other regulated entities know about enforcement actions.
  - Transparency and public disclosure that leverages non-regulatory pressures by disclosing bad performers can be highly effective.

→ However, publicizing good behavior as the norm - and “the right thing to do” - is also important.
  - Social customs importantly influence compliance. Perceptions that noncompliance is the norm can lead to high levels of noncompliance.

→ Regulations and penalty determinations should be clear, consistent, supported by services, & evenly applied.
  - Compliance is enhanced when facilities perceive that regulators are: (1) fair, (2) trying to promote compliance, (3) applying rules similarly across facilities, and (4) providing benefits and services for good behavior.
One more thing: Federalism vs. decentralization

- Existing regulations with decentralized enforcement are typically characterized by (very!) large spatial variability.
- Inspection frequencies, sanction probabilities, & fine distributions vary significantly across states and regions.
- Decentralization offers both benefits and costs.
  - Potential benefits include fewer information asymmetries (i.e. better regulatory information) and monitoring and enforcement that is more tailored to local circumstances (i.e. facility composition, etc.)
  - Potential costs include regulatory capture, a “race to the bottom,” cross-state spillovers, and failures to capture economies of scale.

→ Devolution may be expected to lead to greater variation in enforcement.

→ The welfare impacts of such variation are ambiguous.
Key messages

• An awful lot of observed variation in observed real world compliance can be attributed to traditional economic incentives resulting from traditional enforcement. Enforcement actions get results.

• Regulatory innovations that use information and transparency, prevention activities, cooperative partnerships, and non-regulatory pressures as complements to traditional enforcement may be effective.

• Regulatory innovations that use information and transparency, prevention activities, cooperative partnerships, and non-regulatory pressures as substitutes to traditional enforcement should not necessarily be expected to be effective.
Caveats

• All comments focus on lessons from the US policy environment. Lessons from international contexts, and especially LDCs, may differ.

• All comments are most applicable to regulated firms (rather than individuals), and especially to well-studied larger facilities.

• Compliance is complex! Different metrics and measurements can generate:
  – Vastly different representations of compliance.
  – Vastly different representations of the effectiveness of monitoring and enforcement for compliance.
Knowledge gaps

• Deterrence varies across regulatory settings, industries, facility characteristics, and time. Why, and how?
• How effective are ‘next generation compliance’ tools, including advanced monitoring strategies, new compliance technologies, and public/private partnerships?
• When and where are public monitoring and enforcement actions efficient and cost effective in the real world?
  – Inspections and enforcement get results, but are the benefits greater than the costs? When does enforcement achieve a high “bang per buck”?
  – Costs, including both regulator implementation costs & plant compliance costs, are not well studied.
Selected Surveys &
Some Shameless Self-promotion