Key Takeaways from the June 2015 Inspection and Compliance Workshop

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The Research on Effective Government: Inspection and Compliance Workshop, co-hosted by the Maryland Center for Economics and Policy (MCEP) and the Harvard Business School, took place in Washington, DC on June 1, 2015. The workshop was planned as a forum for in-depth discussion of how research can inform effective strategies for achieving regulatory compliance and sought to lay a foundation for strengthened collaboration between government and academia. Some 120 people attended the workshop, about half from the Federal regulatory agencies and half from academia. Given the liveliness of the discussion during the day and the many positive comments we received from participants following the workshop, we are convinced that this forum filled a real need. We will be planning future events to further the collaborative engagement between the regulatory and academic communities for which there seems clearly to be an appetite.

This summary, organized to follow the workshop's own structure, provides an overview of what we see as the key takeaways from the presentations and discussion during the day. The workshop agenda, as well as downloadable copies of presentation slides, can be found on the MCEP's website here as well as here on UMICRA.

Session I: Effective Targeting

One of the strategies available to resource-constrained agencies is to target firms at a high risk of noncompliance with additional monitoring. Making such targeting effective, however, can pose a range of challenges.

Why do agencies target their inspections?

Targeting is a necessity for many agencies that find their resources are limited compared to the extremely wide scope of firms being regulated. Some agencies have used their targeting policies as a tool for obtaining compliance, explicitly announcing that good firms will be rewarded with a lower inspection rate while threatening non-compliant firms with more extensive monitoring. Additionally, some agencies are legally required to identify and target firms at high risk of noncompliance.

How should agencies identify firms at high risk of noncompliance?

Identifying firms likely to be non-compliant can be difficult. Agencies need to understand the incentives faced by potential violators as well as the challenges firms cite as standing in the way of compliance. Often, a firm's quality culture is an important factor, albeit one that is difficult to measure. Firm attributes associated with noncompliance may vary by context, though firms with a history of past violations and firms in financial distress tend to be more likely to fall into noncompliance. Targeting of firms can also be improved by employing empirical risk models, which may involve the application of machine learning techniques.

What challenges do agencies face in implementing targeting policies?

One of the key challenges to any targeting program is ensuring that it does not accidentally encourage noncompliance by some firms. If a targeting program only steps up inspection rates if there is evidence of a large infraction, firms may be tempted to skirt the law on a host of smaller issues. Alternatively, if a targeting model relies on a select group of quality measures, firms might actively manage only those measures while shirking on other ones.

Session II: Effective Enforcement

Effective enforcement of regulations depends on levying penalties on noncompliant firms. However, the best approach to enforcement is often unclear and different approaches offer different trade-offs.

Which enforcement policies best drive compliance?

Researchers find that better compliance rates tend to result from levying modest penalties that are frequent and predictable rather than very large penalties imposed only rarely. Researchers have also found that enforcement actions taken against a firm tend to result in increased compliance by that firm's neighbors, an effect that does not hinge on the penalty received being very large. Perceptions of vigorous enforcement are also important for encouraging compliance. People tend to overestimate the true likelihood of getting inspected or audited. Managing perceptions are thus an important part of obtaining compliance. Additionally, researchers find that firms are more likely to comply with the law when they believe most of their peers are complying as well. Giving publicity to firms with excellent compliance records thus might assist in managing firms' perceptions of their peers.

Effective enforcement policy also depends on the reason why firms are non-compliant. Some firms fail to comply with the law because they either do not understand the law or do not know how to comply with it, as may be the case with new and inexperienced companies. Taking a more cooperative approach in this situation could help such firms build the capacity and culture to comply with the law in the future.

What challenges do agencies face in pursuing effective enforcement policy?

Agencies sometimes are constrained in their ability to take formal enforcement actions, for reasons ranging from the time and other costs of a legal challenge to statutory limits on their authority to levy large fines. In such situations, more creative measures are needed. For example, agencies can publicize firms' violations in an effort to threaten firms' reputation and brand, potentially prompting a public, political, or shareholder backlash against the firm. Coordinating different agencies' inspection and enforcement efforts also might yield a larger response from firms.

Session III: Inspectors

The human element plays a substantial role in the inspection process. Individual inspectors' training, behavior, and personal characteristics all feed into determining inspection outcomes and effectiveness.

What inspector characteristics are associated with better performance?

Compliance rates tend to be highest when inspectors are perceived as fairly applying the law across firms. Whether an inspector adopts a "strict" or a "flexible" personal inspection style does not seem to have a large effect on compliance rates, provided that this basic sense of fairness is maintained. Inspectors with more experience tend to have higher violation detection rates, but evidence on the effect of inspectors' experience with specific firms is more mixed. In some settings, inspectors who have experience inspecting a particular firm tend to have lower violation detection rates, suggesting that coming to an inspection site with "fresh eyes" may be important. However, in other settings, developing a strong relationship between an inspector and a firm's employees can help to improve compliance. For example, local plant managers sometimes come to see inspectors as allies who may be able to assist them in receiving safety improvement funds from their corporate office.

What can be done to improve the inspection process?

Researchers find that inspectors working in teams tend to detect more violations than inspectors working alone. Training inspectors with an emphasis on communication and teamwork might yield substantial improvements in inspection quality. Additionally, technology has an important role to play. Providing inspectors with Personal Digital Assistants (PDAs) that include a checklist of potential violations improves violation detection rates. Agencies also must choose whether or not to pre-announce their inspections. While unannounced inspections tend to yield more violations, there is some evidence that announced inspections yield higher compliance rates in the long run, suggesting that changes firms make in advance of inspections might "stick".

Some agencies have considered involving third party monitors to conduct inspections and audits on their behalf. Caution is required here. Researchers have found strong evidence that independent auditors, when hired by the regulated firms, tend to compete with each other on the basis of leniency. Inspection quality may be compromised if third party auditors' incentives are too closely aligned with those of regulated firms.

Session IV: Enhancing Compliance by Leveraging Forces beyond Inspections and Enforcement

The fourth session of the workshop discussed alternative strategies for increasing compliance, other than standard inspections and enforcement actions.

What alternative approaches are out there and what challenges do they create?

One alternative approach adopted by a number of agencies is to establish a voluntary violation disclosure program, rewarding firms that report their own violations with reduced punishments and potentially lower inspection rates. This approach may be coupled with establishing strong whistle-blower protection and offering rewards to firms that go above and beyond compliance. This approach benefits agencies by reducing the amount of resources required for inspections. However, the difficulty in implementing this approach is in carefully balancing the punishments and rewards. The punishments and rewards must be large enough that firms will disclose violations, lest they be discovered by an inspector or a whistle-blower, but not so large that firms instead try to cover them up. In situations where disclosed violations often are due to honest mistakes, agencies might consider encouraging or requiring that firms launch compliance training programs for their employees. Agencies can play an important role in shaping these training programs, and in some cases may also be able to assist firms in understanding the complexity of the regulations as well.

Another approach is to rely on public disclosure of enforcement actions and other data collected by the agency, such as a plant's air pollution output. In principle, consumers and the media could respond to this information and boycott or otherwise pressure firms to improve. However, researchers have found that while there is a public response to disclosure, it is often underwhelming. Consumer response tends to be greatest when the information disclosed is clear and simple to summarize. In situations where a lot of information must be disclosed to give an accurate picture, a better response may be obtained if agencies provide a single, easy to interpret index rating for each firm.

Panels I-III: Future Challenges and Cooperation between Academics and Regulators

What future challenges do agencies face?

One major challenge to US agencies is globalization. Regulating imported goods, such as foreign manufactured pharmaceuticals, will require enhanced cooperation with foreign regulators and overcoming a number of cultural and logistical barriers. Agencies also face challenges caused by the rapid pace of technological change. New technologies often challenge the categories established in older legislation, sometimes making it unclear how the law should be applied. New technologies also pose opportunities to agencies, as in the case of deploying electronic monitoring technologies to provide a constant stream of data to regulators. Another challenge for agencies will be to standardize and link together the new wealth of data collected by federal, state, and local agencies. These data could be very valuable if the legal and institutional barriers to integrating them were overcome.

How would regulators and academics benefit from closer cooperation?

Academics can assist agencies in credibly identifying the causal effects of their policies. Better communication between researchers and regulators can assist in identifying cases where existing data and previous changes in agency policy offer opportunities for strong causal analysis. Academics can also help agencies design policies that include experiments, in order to better facilitate future analyses and inform future policy choices.

What forums for communication are there between academics and regulators?

The University of Maryland Inspection and Compliance Research Archive (UMICRA) and the Department of Labor's Clearinghouse for Labor Research and Evaluation (CLEAR) both host databases of research on topics relevant to agencies. The Maryland Center for Economics and Policy (MCEP), in addition to administering UMICRA, can also assist agencies in finding potential academic collaborators. The White House Social and Behavioral Sciences Team is seeking to incorporate behavioral research into current government programs and is piloting a number of policy experiments. The National Center for Environmental Economics is also interested in studying the behavioral components of compliance. Additionally, the Administrative Conference of the United States can assist agencies in conducting evaluations and can provide various procedural recommendations.

Further Reading

A number of workshop participants have written relevant review articles that serve as a good introduction to the compliance literature. These include:

- The Economics of Environmental Monitoring and Enforcement, Jay P. Shimshack, 2014.
- The Porter Hypothesis at 20: Can Environmental Regulation Enhance Innovation and Competitiveness?, Stefan Ambec, Mark A. Cohen, Steward Elgie and Paul Lanoie, 2013.
- The Effectiveness of Environmental Monitoring and Enforcement: A Review of the Empirical Evidence, Wayne B. Gray and Jay P. Shimshack, 2011.
- Quality Disclosure and Certification: Theory and Practice, David Dranove and Ginger Zhe Jin, 2010.