

## Citation

Ko, K., Mendeloff, J., & Gray, W. (2010). The role of inspection sequence in compliance with the US Occupational Safety and Health Administration's (OSHA) standards: Interpretations and implications. *Regulation and Governance*, 4(1), 48–70.

## Highlights

- The study's objective was to examine the effect of the sequence and timing of OSHA inspections on compliance with OSHA standards, as measured by the number of violations cited during an inspection.
- The study used a regression model to compare the number of OSHA violations cited during inspections based on their order during the sample period—for example, during the second compared with the first inspection during the sample period—and for which different lengths of time had passed since the previous inspection.
- Examining firms inspected multiple times, the study reported that the total number of violations cited in the second inspection was lower than the number of violations cited in the first. In these firms, the number of violations cited was larger for every additional year elapsed since the previous inspection.
- The quality of causal evidence presented in this study is low. Although it provides interesting descriptive information, the study does not provide evidence of a causal effect of inspections, or their timing, on violations.

## OSHA Enforcement Activities and Outcomes

In general, OSHA inspections are conducted for four reasons: a randomly conducted inspection at work sites in high-injury industries; if a complaint has been filed by employees or their representatives; if there has been an injury or fatality; and as a follow-up to a previous inspection. An inspector can issue citations for violations of safety standards observed during the inspection. Depending on the nature of the violation(s), the inspector might also issue a monetary penalty. Those firms with more violations are more likely to receive subsequent inspections to determine whether the violations have been corrected.

The key outcome of interest to the study was compliance with OSHA standards, as measured by the number of violations cited during an inspection.

## Features of the Study

The study used a regression model to compare the number of OSHA violations cited during reinspections with different sequence numbers and when different lengths of time had passed since the previous inspection. The model included controls for the type, scope, and category of the inspection; establishment size; industry; year; and the total number of inspections conducted for the firm over the sample period.

The authors used inspections data from the OSHA Integrated Management Information System for 549,398 inspections in manufacturing plants in the 29 federal OSHA states from 1972 to 2006.

## Findings

- The study reported that the total number of violations cited in the second inspection was at least 31 percent lower than the number of violations cited in the first inspection, among those firms inspected more than once. The difference was smaller for serious violations.
- The number of violations cited was larger for every additional year elapsed since the previous inspection for firms inspected more than once. This difference was small, approximately 15 percent over five years.

## Considerations for Interpreting the Findings

This study described what happened to the pattern of violations in firms that received repeated inspections. Although it provides interesting descriptive information, the study does not provide evidence of a causal effect of repeated inspections or their timing on violations. This is because, by definition, the patterns of violations in firms can be observed only in those firms that were reinspected. However, the firms that were reinspected likely had different underlying safety levels than those that were not, because firms with more violations are more likely to be reinspected. Although the study controlled for the total number of inspections occurring over the study period, this might not completely capture differences across firms inspected one or many times.

## Causal Evidence Rating

The quality of the causal evidence presented in this study is low. This study provides interesting descriptive information, but it does not present evidence of effectiveness of reinspections. To provide more convincing causal evidence that meets CLEAR criteria, the study could have included a firm-level fixed effect; this would allay concerns that there might have been underlying differences between the firms being compared.