

Citation

Gray, W., & Scholz, J. (1993). Does regulatory enforcement work? A panel analysis of OSHA enforcement. *Law & Society Review*, 27(1), 177–213.

Highlights

- The study's objective was to determine the effect on injury rates of OSHA inspections that resulted in penalties during the 1980s. Although OSHA no longer operates as it did during this period, this study provides historical context for changes that were later made to the program.
- The study used a regression model to compare the percentage change in injury rates when firms had received inspections that resulted in penalties during the past four years and when the same firms had not received penalties during the past four years.
- The study found that inspections that resulted in penalties were associated with statistically significant reductions in lost workday injuries (by 22 percent) and lost workdays (by 20 percent) during the three years following the inspection.
- The quality of the causal evidence presented in this study is low. This means we are not confident that the changes in injury rates within firms when they received inspections that resulted in penalties are attributable solely to these penalties.

OSHA Enforcement Activities and Outcomes

The study examined the effect on injury rates of OSHA inspections that resulted in penalties during the 1980s. The study analyzed the effect of having an inspection that resulted in penalties in the current year, the previous year, two years earlier, and three years earlier on (1) lost workday injuries (that is, injuries that resulted in being unable to work or restricted work activity) per 100 employees and (2) lost workdays per 100 employees. Although OSHA no longer operates as it did during this period, this study provides historical context for changes that were later made to the program.

Features of the Study

The study used a regression model with firm fixed effects to compare the percentage change in injury rates when firms had received inspections that resulted in penalties during the past four years and when the same firms had not received penalties during the past four years. The model included controls for employment and hours, which varied over the study period. The authors used data from the Bureau of Labor Statistics annual injury survey and OSHA's Management Information System for 6,842 manufacturing plants from 1981 to 1985.

Findings

Inspections that resulted in penalties were associated with statistically significant reductions in lost workday injuries (by 22 percent) and lost workdays (by 20 percent) during the following three years.

Considerations for Interpreting the Findings

In this study, the estimated changes in injury rates may reflect underlying differences in safety levels or changes in other factors over time, rather than the impact of inspections that result in penalties. Penalties are assessed when an inspection uncovers OSHA violations; therefore, the years when firms received a penalty may have been marked by more egregious safety violations that would have been addressed by management over time, even absent the inspection and penalty, than the years when firms did not receive penalties or were not inspected. In addition, the model does not include controls for year, so the estimated differences in injuries could reflect changes over time in OSHA's policies regarding inspections and penalties, which could be associated with secular changes in workplace safety.

Causal Evidence Rating

The quality of the causal evidence presented in this study is low. This means we are not confident that the changes in injury rates within firms when they received inspections that resulted in penalties are attributable solely to these inspections and penalties. To provide more convincing causal evidence that meets CLEAR criteria, the study could examine only firms that received penalties at random or use some underlying random variation in the receipt of penalties.