Safety regulations for businesses are critical to ensure that consumers, workers, businesses and the environment are protected. But ensuring compliance from the private sector while minimizing the administrative costs of regulation continues to be a key challenge for governments.

This study aims to evaluate the use of mechanisms to increase accountability of inspectors and firms in the context of business safety inspections, assessing their impact on compliance, safety, leakages, the quality and efficiency of the inspections, and firm performance.

**Context**

In Peru, the inspection system related to building safety, which affects new and existing businesses, is characterized by low compliance with norms, misaligned incentives and high transaction costs.

Based on data analyzed in a pilot municipality, only 33 percent of firms that request a certificate comply with safety standards and pass the inspection after the first visit. With more visits, the share of firms that comply increases to 45 percent. Similar data was gathered in 2017 from three municipalities (San Isidro, Surco, and Trujillo) showing that only 37 percent of firms comply with all requirements and passed the inspection, after various visits.

Based on these data, field visits and discussions with stakeholders, two key constraints were identified: (1) lack of standardization in the regulation which leads to inspectors’ discretion when implementing the norms, and (2) inadequate municipal capacity to monitor compliance and enforce sanctions for noncompliance.

**Interventions**

The impact evaluation will test three interventions: i) the adoption of an electronic system (the e-system), ii) audits on inspectors by independent verifiers, and iii) audits on firms by inspectors from the municipalities.

The e-system was designed to standardizing the inspection and generating high-frequency longitudinal data on inspectors and inspections. It provides a mobile application to conduct inspections, and a digital platform to generate inspection reports with photographic panels. It eliminates paper forms and reduces inspection time by facilitating form selection, filling, and delivery. The system helps generate standardized data that is more accurate, complete, and easily accessible to municipalities. More details about the e-system are available [here](#).
Evaluation Design

The study will implement three randomized control trials (RCT) sequentially. The first RCT will assess the impact of the e-system on performance, efficiency, and compliance indicators. Inspectors will be randomly assigned to a treatment (tablet) or comparison (paper) group. This phase of the study will be implemented for 1.5-2 months in each municipality, after which the use of tablets will be expanded to all inspectors.

The second RCT will evaluate a monitoring scheme of inspectors involving random quality checks. Inspectors will be randomly assigned, in equal proportions, to a treatment and comparison groups where 50 or 10 percent of their inspections will be audited, respectively. A dedicated group of qualified third-party auditors will conduct the inspection audits within two days after the inspectors conduct their own assessments.

The third RCT will experimentally vary the firm’s auditing likelihood to incentivize businesses to maintain building safety standards after they have obtained a certificate. High-risk firms will be randomly assigned into audit probabilities of 10, 50 or 100 percent (the latter being the annual target in the regulation), while medium and low-risk firms will be randomly assigned to audit probabilities of 10 or 50 percent (the latter being the annual target in the regulation). See Figure 1.

Figure 1. IE Design - Audits on Firms

![Figure 1. IE Design - Audits on Firms](image)

(in cases when the associated risks are low). This impact evaluation will contribute to fill this gap and provide inputs to the body of knowledge on how to make institutions work for the private sector.

The challenges of enforcing compliance with minimum burden to firms are common to different types of accountability systems being promoted under the business environment development agenda, including interventions related to business licensing inspections, trade facilitation inspections, and agribusiness phytosanitary inspections. Results from this impact evaluation may therefore inform portfolio and managerial decisions for a large number of projects in the international development agenda that deal with improving accountability systems.

Materials

Methodology Note

e-System Brief

Researchers

- **Manuel Barron**, Associate Professor, Universidad del Pacifico
- **Guadalupe Bedoya**, Economist, the World Bank
- **Paul Gertler**, Li Ka Shing Professor of Economics, UC Berkeley
- Ana Goicoechea, Senior Economist, the World Bank
- Diego Garcia, Analyst, the World Bank

Research Funding Partners

UK Aid Prosperity Fund, World Bank Group.
World Bank.

Policy Relevance

Currently, there is little evidence on the right balance between monitoring and enforcement mechanisms to improve safety while keeping the burden to businesses low