



# Controlling Corruption: Auditing versus Community Participation

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PHOTOGRAPHS BY BENJAMIN OLKEN

**C**orruption is difficult to measure and even more difficult to control—or so claims conventional wisdom. Benjamin Olken, economist and affiliate of the Abdul Latif Jameel Poverty Action Lab (J-PAL), devised a method to measure corruption and used it to evaluate alternative strategies to reduce corruption on an Indonesian road-building project. Two types of strategies were tried: encouraging community participation and increasing the probability of audits. The results may surprise both those who believe nothing can be done about established corruption and those who advocate participatory monitoring:

## **Traditional government audits reduced “missing expenditures” by eight percentage points.**

In some villages, road-building teams were told in advance that the official government audit agency would be auditing their work. Despite the bureaucracy’s reputation for corruption, these audits increased legitimate expenditures on roads.

## **On average, community monitoring did not reduce corruption.**

In some villages, hundreds of villagers were invited to “accountability meetings” previously attended only by local elite; half of these groups were also given anonymous comment forms. Community participation had the largest effect when invitations were distributed through schools, rather than by neighborhood elites. However, it only reduced missing labor costs, in which villagers often had a personal stake, and did not have any effect on missing materials costs.

## **Corruption can be measured as “missing expenditures.”**

Olken trained engineers to examine a completed road and estimate how much had been spent to build it. Subtracting these estimated costs from the official recorded cost revealed missing expenditures: one measure of losses due to corruption.

## **Measuring corruption using perceptions can potentially be misleading.**

A survey of Indonesian villagers found that the correlation between their perception of corruption and measured corruption is small and subject to biases. Estimating corruption based on perceptions may suggest the wrong policies.

For more details on this study see Olken (2006 and 2007) available at [www.povertyactionlab.org](http://www.povertyactionlab.org)

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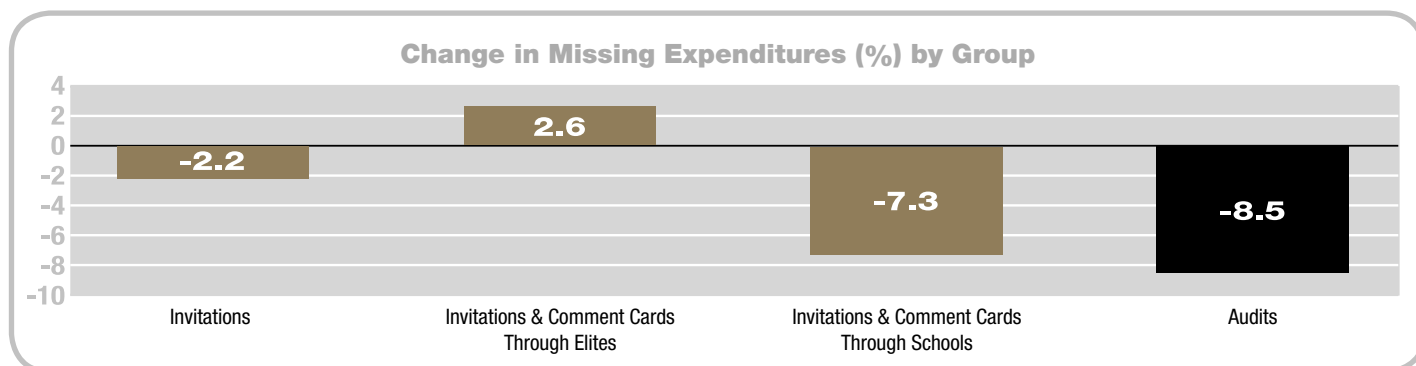
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## Background

An Indonesian government program supported by a loan from the World Bank, the Kecamatan Development Program (KDP) funds projects in about 15,000 villages each year. Each village receives an average of \$8,800, which they often use to surface existing dirt roads.

Two checks on corruption are built into KDP. First, funds are paid to village “implementation teams” in three installments. To receive the second and third payments, the teams must make accountability reports at an open village meeting. Second, each project has a 4 percent chance of being audited by an independent government agency. This study introduced two anti-corruption strategies: enhancing community participation and increasing government audits. Despite these measures, corruption accounts for more than 20 percent of reported budgets.



### Mixed Results for Community Participation

Although KDP requires public accountability meetings, in practice only village leaders participate. As part of a randomized controlled experiment involving 608 villages, to increase community participation Olken widely distributed invitations in some villages. In half of these, community members also received comment forms, either from neighborhood heads or through schools.

The invitations did increase participation. On average, 13.5 more non-elite villagers attended meetings, comment forms were returned, and meeting attendees were slightly more likely to discuss corruption-related problems. A “process evaluation” therefore might find that participation worked, but, on average, it did not reduce missing expenditures.

Olken suggests two explanations. First, monitoring is a public good, and people are more likely to help when they benefit personally. Inviting many people did reduce missing labor expenses—often community members worked on the roads—but had no effect on the much more important problem of missing materials expenses. Community participation promoted people’s own interests but not the public good. Second, this process can be captured by local elites. Even access and information may not be sufficient for grassroots actors to control corruption if those who benefit can control the process. This may be why of the four community participation strategies tested, comment cards distributed through schools, a “neutral” location, was the only treatment with a significant effect.

### Government Audits Reduced Missing Expenditures

When corruption is considered pervasive throughout the auditing bureaucracy, can government audits help? Perhaps surprisingly, Olken’s randomized controlled experiment proved that they can.

In about half of the villages Olken increased the probability of an audit from 4 percent to 100 percent; every implementation team in this group knew it was certain to be audited. These audits were performed by the same government agency that otherwise monitored KDP—an agency often considered corrupt.

On average, these audits decreased missing expenditures by eight percentage points. Audits caused more materials to be legitimately used in building the roads but did not change reported prices.

Importantly, road-building elites responded to private incentives. Audits increased nepotism, the hiring of family members, and were most effective when officials faced elections soon.



## Cost Effectiveness of Government Audits

The audit treatment reduced missing expenditures but at the cost of conducting many more audits. However, even auditing 100 percent of the village projects proved cost effective.

Although audits cost \$500 each, they improved roads by an average of \$1,165 each. On the whole—even after factoring in all costs and transfers—villages were \$245 better off per average audit.

## How to Measure Corruption

Ordinarily, researchers use “corruption perceptions” data: surveys of outside experts’ opinions on corruption. Even if these surveys actually measure corruption—and not other sources of dissatisfaction—they do so roughly at best.

Other research by Olken suggests that villagers’ perceptions of corruption in their communities are systematically biased—for example, people think there is more corruption in ethnically diverse communities while in fact there isn’t.

Corruption can sometimes be inferred even when it cannot be observed directly. Olken trained teams of engineers to estimate the cost of building a road. The engineering teams even built their own model roads to calibrate their measurement technique. The differences between their estimates and a village’s reported expenditures capture corruption: project funds “missing” from the road.

While this procedure cannot pinpoint levels of corruption, it does measure differences—such as the difference in corruption between two villages, or between experimental groups. And although it only captures missing expenses—not, for example, nepotism—it reveals an effective anticorruption strategy and permits direct measurement of a previously elusive quantity.



## The Power of a Randomized Trial

These findings offer two surprises: the entrenched corruption in KDP was not invulnerable, but increased grassroots participation was not the solution.

Because corruption can be widely embedded in a society, it is difficult to study anticorruption measures using traditional techniques. For example, when places with low corruption have active community groups, does that mean that the groups combat theft, or does a culture of openness both allow the groups to effectively operate and cause lower corruption?

A controlled experiment—in which each village was randomly assigned to receive audits, invitations, both, or neither—allows these effects to be disentangled in a straightforward way because it draws the clearest line possible from cause to effect. Best of all, experiments permit the data to surprise us—as did Olken’s results.

### Experimental Treatments by Group

| Group                    | Audit Probability | Accountability Meetings | Invitations | Comment Cards | Villages |
|--------------------------|-------------------|-------------------------|-------------|---------------|----------|
| Audit                    | 100%              | ✓                       |             |               | 93       |
| Participation I          | 4%                | ✓                       | ✓           |               | 105      |
| Participation II         | 4%                | ✓                       | ✓           | ✓             | 106      |
| Audit & Participation I  | 100%              | ✓                       | ✓           |               | 94       |
| Audit & Participation II | 100%              | ✓                       | ✓           | ✓             | 96       |
| Control                  | 4%                | ✓                       |             |               | 114      |

## REFERENCES

Olken, Benjamin A. 2007. “Monitoring Corruption: Evidence from a Field Experiment in Indonesia.” *Journal of Political Economy*. 115: 2.  
 Olken, Benjamin A. 2006. “Corruption Perceptions vs. Corruption Reality.” NBER Working Paper #12428.



## **Controlling Corruption: Government Auditing versus Community Participation in Indonesian Road Building**

**A randomized controlled trial of anticorruption strategies revealed surprising results:**

- Traditional government audits cost-effectively decreased “missing expenditures” by eight percentage points.
- On average, community monitoring did not reduce corruption.
- Corruption can be measured as “missing expenditures.”
- Measuring corruption using perceptions can potentially be misleading.