egap EVIDENCE IN GOVERNANCE AND POLITICS

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Strategy: **The "missing infrastructure" strategy to measure corruption**

How it works:

The key idea of this strategy (developed by Golden and Picci 2005) lies with the difference between a measure of the physical quantities of public infrastructure and the cumulative price government pays for public capital stocks. Where the difference is larger between the monies spent and existing physical infrastructure, more money has been siphoned off in mismanagement, fraud, bribes, kickbacks, and embezzlement; that is, corruption is greater. The intuition underlying this is that, all else equal, governments that don't get what they pay for are those whose bureaucrats and politicians are extracting more public monies in corrupt transactions.

The procedure is to create two sets of measures of public capital stock using two different types of data. The proxy of "corruption" is based on the ratio between the two. The first data used measures physical infrastructure, whereas the second measures the cumulative price government paid for public investments (infrastructure expenditures) computed using what is called the perpetual inventory method (PIM), a standard method for calculating capital assets. The physical measure begin with an inventory: kilometers of roads; kilometers of railroads; the number of beds in public hospitals; the number of classrooms in elementary, middle and upper school, etc. Goods are normalized and standardized, and then aggregated into broader categories (transportation, education, etc.). The resulting measures are then expressed as ratios to the national average and multiplied by 100, so that a measure of 124 means that a given territorial unit has 24 percent more infrastructure than the national average, after having normalized for size and population. The cumulative measure of what has been paid for public investments relies on government records of new construction going back a minimum of 30 years, corrected for variations in the costs of labor and materials as well as the geographic difficulties of public construction.

The resulting ratio captures how effective the subunit (region, province, state) is in turning money into public works compared with the national average. Italy's most corrupt region was (as of 1997) Campania, which had 36 percent of the infrastructure it would have had if government investments had been used at the national average. Campania had paid per unit of public capital four times what Italy's best performing region (Umbria) had paid. Mexico exhibits even greater cross-state variation, and over 30 years (prior to 2003) sixty percent of the public expenditures on infrastructure were diverted or wasted.

The index cannot be interpreted as a measure of the extent of inefficiency or corruption in any specific year. It is a measure of the accumulated loss of public infrastructure over prior decades. If properly constructed, the index can measure year-on-year changes in corruption across subunits relative to each country's national average.

Data gathering strategy: Via enumeration of all existing public capital combined with government records of all expenditures for public construction on an annual basis going back 30-50 years or longer

SDG goals this could be used for:	Could be used to create within-country and cross-country measures of corruption in public works contracting to assess the scope of corruption in the public sector
Advantages:	Non-manipulable. Direct measure.
Disadvantages:	Initial data gathering laborious and expensive. Measure captures stock and not flows Government cooperation required recovering historical spending records for infrastructure. Inter-country comparisons may not be valid and additional conceptual work required to create standardized measure that permits comparison across countries. May conflates corruption and inefficiency.
References:	1. Miriam A. Golden and Lucio Picci, "Proposal for a New Measure of Corruption, Illustrated with Italian Data," Economics & Politics, vol. 17, no. 1 (March 2005): 37-75. 2. Arturo del Castillo et al., "Analysis of the Generation of Public Infrastructure in the Last 30 Years," CEI Consulting and Research (Mexico), 2005. 3. Benjamin Olken," Monitoring Corruption: Evidence from a Field Experiment in Indonesia," Journal of Political Economy, 115 (April 2007), 200-49.