

Water and Sanitation Sector Integrity Risk Index

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Index Design

Why a Water Integrity Risk Index?

- Policy reform effectiveness and adequate policy targeting are difficult to gauge without valid and reliable measurement of corruption.
- The Water Integrity Risk Index (WIRI) aims to provide an objective measure of integrity risks in the urban water and sanitation (W&S) sector.
- We apply Big Data methods to administrative data and survey (self-reported experience) datasets in order to develop a comprehensive and actionable integrity risk indicator.
- The WIRI is a replicable, transparent and scalable index, which enables us to compare risk levels in the sector across time and between cities.

Conceptual Framework

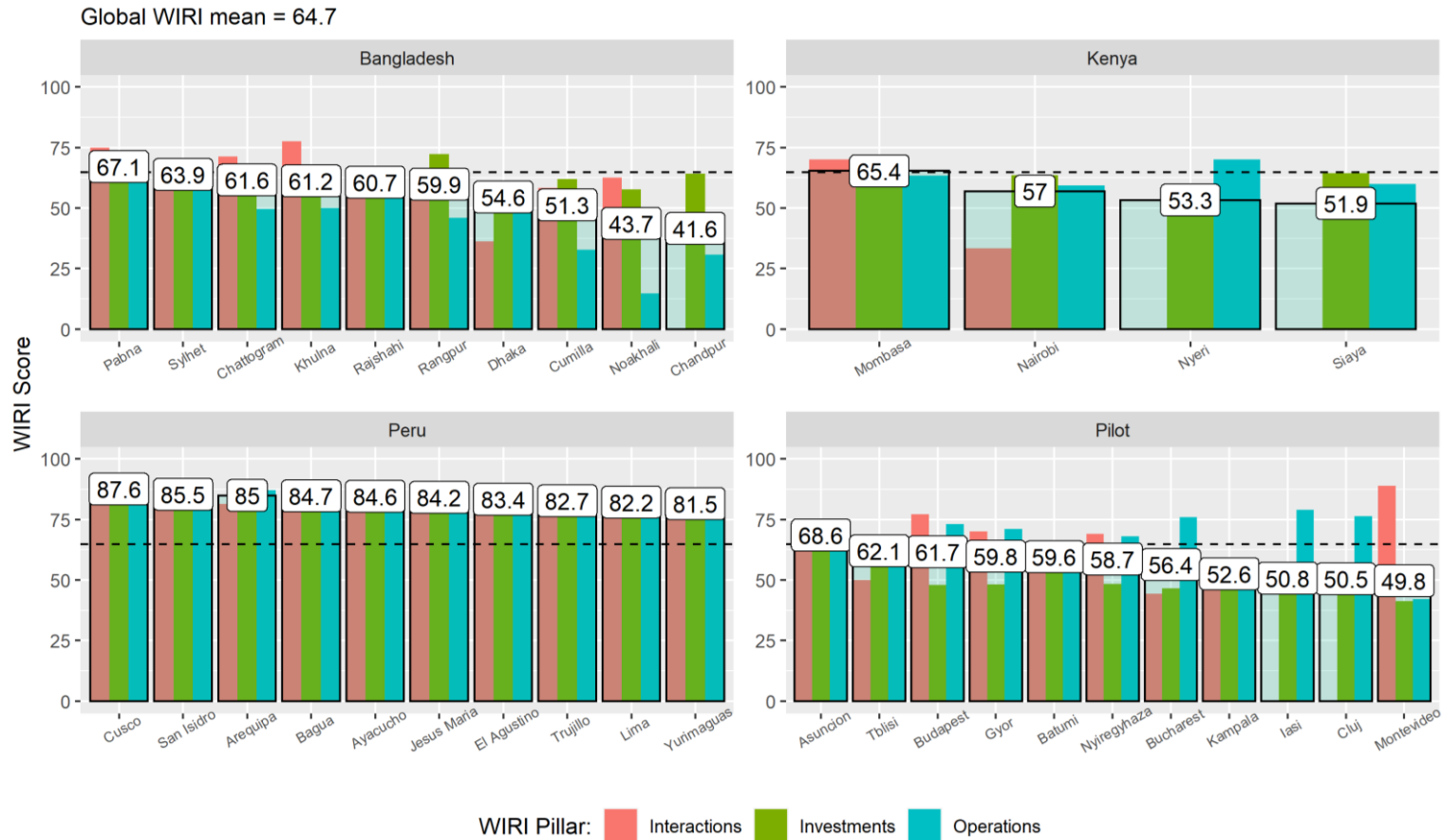
- Our framework focuses on 3 main pillars of integrity in the W&S sector:
 1. Public investment projects (e.g., building new pipelines or drainage),
 2. Recurrent spending supporting ongoing operations (e.g., paying salaries, purchasing computers), and
 3. Client-utility interactions (e.g., paying utility bills, setting up a water connection).

Methodology

- We standardize each component indicator of integrity-risk [0-100] so that they can be directly compared (higher values imply higher integrity).
- We calculate the weight of each component indicator (five in total, categorized into 3 pillars) by the amount of data points available. Fewer available data points in a component lead to a decrease its pillar weight on the index.
- We calculate the weighted mean of each indicator to derive the composite WIRI score based on available data. When data for one pillar is missing, the pillar is penalized as 0, when two are missing, the observation is dropped.

Results

Cross Section (Global)



Time Series (Peru)



Conclusions



WIRI aims to combine a robust methodological framework with grass-roots knowledge of specific cases

Working with local organizations can improve the robustness of the WIRI

Technical training and methodological discussions with partner organizations are key elements moving forward

Thank you!