



Performance Measurement: Economic and Service Quality Regulation

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Context

Institutions: ARCE, Ceará (184 municipalities),
Cagece--SOE with 149 municipal divisions.

Information: New Manual for Indicators--Facts

Incentives: Managers (prices) and Citizens (signals)

Ideas: Benchmarking Improves Sector Performance

Individuals: Leadership (for implementing programs)
and Public Awareness and Support (transparency
and participation).

If not now, when?



Some Opening Thoughts

**Spare us from cowardice that shrinks
from new truths;**

**Spare us from laziness that is content
with half-truths; and**

**Spare us from arrogance in thinking
that we know all truth.**

(Anon)

New Truths



- 1. *Technical:*** Ten to twenty key performance indicators (KPIs) can provide the basis for evaluating performance.
- 2. *Organizational:*** Commitment at the highest levels is necessary for effective data collection and analysis.
- 3. *Strategic:*** Benchmarking is essential for managers, regulators, and policy-makers.



1. Number of KPIs

Start with a manageable set of KPIs (10 to 20).

Identify Trends and Establish Baselines, e.g.

- **Output per worker,**
- **Labor Costs as a Percent of OPEX,**
- **Workers per connection,**
- **Service Quality,**
- **OPEX per unit Output,**
- **Unaccounted for Water**



2. High Level Commitment

Leaders must provide resources for data systems: collection, authentication, storage, access, and analysis.

Capacity-building for staff must be supported by leaders.

Leaders must use the data to evaluate performance and develop internal incentives (by managers) and regulatory incentives.



3. Strategic Uses of KPIs

Decision-makers manage what they measure.

Publication of raw data and results reduces information asymmetry.

Reward high performers (carrots); remediate low performers (share best practice).

Focus on what is important, not on what is easily measured.

Half-Truths



4. All dimensions of performance cannot be easily measured, so studies are misleading.
5. Studies of comparative performance are likely to have errors, so they should not be undertaken.
6. Benchmarking results can be misused, so they should not be made widely available.
7. Disaggregated cost comparisons can result in differential prices in a region, so data should be aggregated to facilitate cross-subsidization.



4. Measurement Difficult

Management information systems and reporting requirements are already in place. Note: Avoid Information Empires.

Studies that are well done will point out strengths and limitations of the data and indicators.

Affected parties have an opportunity to “explain” why the results might be misleading (burden of proof on operators—unique circumstances).



5. Data Errors

Leaders seek continuous improvement in information systems.

Clear definitions facilitate comparisons.

Managers need data to make decisions about where performance improvements are possible.

“People are entitled to their own opinions, but not to their own ‘facts’”.

Data errors should not halt comparisons.



6. Misuse of Comparisons?

Will unreasonable targets be set?

Will the press sensationalize the comparisons and vilify managers and regulators?

Will citizens not appreciate the unique circumstances of their local utilities?

Will managerial and political careers be affected by the release of performance studies?



7. Current Prices Threatened?

Better performance provides cash flows for improved quality, coverage, and maintenance.

Sustainability in the water sector requires disaggregated data analysis (trends in local costs, ecology, and hydrology).

Who benefits from cross-subsidies?

Transparency is essential to review cross subsidies, create incentives, and develop cost-based prices.

Humility



- 8. Seek consistency across utility rankings and performance scores.**
- 9. Policy objectives are prioritized by elected officials, not by “experts”.**
- 10. Avoid jargon when communicating results.**
- 11. Keep stakeholders fully informed about the strengths and limitations of different methodologies.**



8. Seek Consistency

Robust comparisons give decision-makers comfort and credibility.

A variety of tools are available, but keep comparisons simple at the start of the program.

Data accuracy should be noted.



9. Prioritize Objectives

Elected officials, with citizen input, establish the priorities for the water sector.

Stakeholders need to participate in the process: public pressure for performance.

Weights can be given to KPIs to create an Overall Performance Indicator.

Use *scores* not *rankings* when comparing performance.



10. Communicate Results

Publish the Preliminary Study (internet and written Executive Summaries) and invite feedback.

Avoid excessive jargon: place technical material in appendices.

Link the results to the users' interests.



11. Strengths and Weaknesses

Incentives must be based on reality: performance comparisons as a starting point.

“The perfect is the enemy of the good.”

- **Institutions**—regulators, operators, ministries
- **Information**—for decision-makers
- **Incentives**—internal and external
- **Ideas**—public support for sector activities
- **Individuals**—leadership matters

Conflict Resolution Matrix

Addressed
By Research

Technical
Work

Adaptive
Work

Conflict Over Facts	Conflict Over What is important
Conflict Over Distribution of Gains & Costs	Conflict Over Jurisdiction or Authority

Addressed by
Engaging
People with
Adaptive
Challenges
in Research
And Dialogue

Addressed
By Research
And Negotiation

From PURC Director
Mark Jamison



Using Benchmarking Results

- **Public Awareness (Transparency and Public Acceptance/Legitimacy)**
- **Internal Incentives (Efficiency)**
- **Regulatory Incentives (Effectiveness)**
- **Price Reviews (X-factors and Price Adjustments)**
- **Baselines, Trends, and Targets**

Summary of Steps



- 1. Create a Benchmarking Team:** professionals need a variety of technical and engineering skills so the Team has a comprehensive understanding of the water utility's processes and operations;
- 2. Establish Clear Study Objectives:** the key questions frame the issues at hand and identify data needs;
- 3. Select an Appropriate Benchmarking Methodology:** analysts must be aware of the strengths and limitations of techniques for analyzing cost and production functions;
- 4. Gather Raw Data for Yardstick Comparisons:** this stage involves the selection of the appropriate comparison group of companies or standard (depending on the benchmarking method selected);
- 5. Apply Data Verification Procedures:** after data collection, techniques for verifying and comparing data need to be applied;
- 6. Perform Data Analyses:** this crucial stage involves the application of methodologies appropriate for answering key questions;

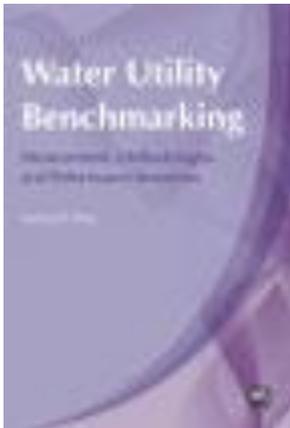


- 7. Conduct Sensitivity Tests:** to ensure robust results, there needs to be comprehensive testing for model specification, alternative inputs and outputs, and alternative methodologies;
- 8. Develop Policy Implications:** explore potential determinants of inefficiencies;
- 9. Engage in Information dissemination:** reporting the results of performance comparisons helps engage stakeholders in the process;
- 10. Establish Rewards and Penalties:** procedures for planning and implementing incentives and corrective actions;
- 11. Seek Public Comments and Promote Stakeholder Awareness:** such a campaign, with media assistance, promotes improvements in utility operations;
- 12. Prepare Follow-up Studies as Part of the Performance Review:** benchmarking is an on-going process for monitoring and evaluating performance outcomes.

Further Resources

www.regulationbodyofknowledge.org

References: recent IWA books



Berg: *Water Utility Benchmarking*

Marques: *Regulation of Water and Wastewater: An International Comparison*

Mugisha: *Utility Benchmarking and Regulation in Developing Countries: Practical Application of Performance Monitoring and Incentives*



Use New Truths, Avoid Half-Truths

Performance Scores serve as catalysts for better stewardship of water and other resources.

Public Dissemination improves sector performance.

If regulators cannot identify historical trends, determine today's baseline performance, and quantify relative performance across utilities, then as an Indian regulator said, they may as well be writing "pretty poetry".



Thank you

Please feel free to ask questions about the strengths and limitations of benchmarking and performance measurement for

1. Managerial decision-making

2. Economic and Quality Regulation