

Financing Sewers in the 19th Century's Largest Cities: A Prequel for African Cities

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Water, Health, and Wealth

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Important topic

- Large and complex investment decisions
 - Cities are capital constrained, land is scarce, persistence
 - Many competing priorities
- Wide-ranging implications on people, cities, and growth
 - Service access as “price” affecting migration decisions
 - Feler and Henderson (2011), Ambrus, Field, and Gonzalez (2015), Lagakos, Mobarak, and Waugh (2017)
- Need for more research
 - Externalities, human capital, migration, institutions

Demand and supply for public services

- Demand
- Supply
- Role for policy makers

Demand: Water, Health, and Wealth

- Related literature:
 - Privatization of water services in Argentina (Galiani et al., 2005)
8% reduction in child mortality (municipalities from 1990 to 1999)
 - Demand for purified water in Zambia (Ashraf et al., 2010)
An increase of 100 Kw in the offer price reduces buying by 7 p.p. (11% of mean)
Heterogeneity in willingness-to-pay (marginal vs. average consumer)
 - Exclusion of water services in Brazil (Feler and Henderson, 2011)
One SD increase in share of households with water → one SD increase in the growth rate in the number of households.
 - Demand for piped water in Morocco (Devoto et al., 2012)
Strong take-up, increase in water consumption, time saved (for leisure)
No effect on water-borne diseases, water quality.

Demand: Water, Health, and Wealth

This paper:

- Access and reliability
- Shock: Disruption of supply and importance of maintenance
- Data:
 - Administrative + survey + firms
 - Disaggregated and high frequency
- Measuring supply disruptions using complaints
 - Placebo tests: malaria, worms, other complaints
- Broad set of outcomes: Health, time use, economic activity.
 - Behavioral adjustments at different frequencies (months/weeks)
- What about: other sample cuts, inter-temporal shifts

Supply: Financing Sewers

- Related literature
- Cross country study of institutions and historical events
- Rich characterization of frictions to implementing disruptive technologies
 - Not only credit constraint
 - Implementation issues
 - Multiple stakeholders
- Implications for today
 - Inequality and distribution of preferences; localized diseases
 - Political accountability
 - Relevant counterfactual?
 - Implications for other disruptive technologies

Demand and supply for public services

- Demand
 - Water supply: Access, reliability, and maintenance
 - Distribution of willingness-to-pay
- Supply
 - Politics of supply
 - Different technologies and models of supply to consider
- Role for policy makers
 - Large fixed costs and externalities
 - Funding and tax base (capitalization of improvements into land values)
- Other services

Need for more theory, data, and methods

- Data:
 - Administrative: short time series, coverage, policy
 - Survey of households and firms: expensive, design
 - Market transactions
 - Satellite imagery, maps
 - World Bank website
- Relevant counterfactual
- General equilibrium
- Importance of institutional frictions, political process