Financing Sewers in the 19th Century’s Largest Cities: A Prequel for African Cities
by Robert Buckley

Water, Health, and Wealth
by Nava Ashraf, Edward Glaeser, Abraham Holland, and Bryce Steinberg

Discussant: Maisy Wong
Wharton Real Estate
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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

• 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