MY410 Week 8 Seminar

Chao-Yo Cheng

Lecture takeaways

- Making concrete causal claims is hard. So, too, is making claims about a whole population from a sample.
  - Existence: Does **X** cause **Y**?
  - Importance: Does **X** have a large impact on **Y**?
  - Mechanism (explanation): How does **X** affect **Y**?
- As social scientists interested in explaining the causes of things, though, we still want to try!
- There are a variety of tools to help us in those attempts.
  - Experimental (e.g., lab, survey, and field).
  - Non-experimental/observational (natural experiment and quasi-experimental) (e.g., selection on the observables/matching; regression discontinuity; difference-in-differences; instrumental variable; synthetic control).
- Our focus has been on identifying "effects-of-causes" not "causes-of-effects."

Reading: Carlitz (2017)

ELSEVIER
www.elsevier.com/locate/worlddev

CrossMark

World Development Vol. 93, pp. 16–30, 2017
0305-750X/

http://dx.doi.org/10.1016/j.worlddev.2016.11.019

Money Flows, Water Trickles: Understanding Patterns of Decentralized Water Provision in Tanzania

RUTH D. CARLITZ*
University of Gothenburg, Sweden

Summary. — Over the past three decades, an increasing number of low- and middle-income countries have decentralized water provision to the local government level, and have sought to more thoroughly involve users in service delivery. Such reforms reflect the twin goals of encouraging greater responsiveness to local needs and promoting sustainability. This study illustrates how the aims of decentralization can be undermined in the absence of robust democratic competition, and how governments interpret "demand" by voters in such settings. Focusing on the Tanzanian water sector, the paper first traces the distribution of money for water from the central government to the district level. Next, I consider how district governments use these funds to distribute water infrastructure within their jurisdictions, using geo-referenced data on all 75,000 water points serving rural Tanzanians. I find that the central government's allocation of money to districts is fairly unresponsive to local needs. However, the pattern of distribution cannot primarily be explained by politics, with the exception of consistent favoritism of the Minister for Water's home district. Political favoritism is more pronounced at the local level. Within districts, the distribution of new water infrastructure is skewed to favor localities with higher demonstrated levels of support for the ruling party. In addition, wealthier and better-connected communities—those with the resources to more effectively express their demands—are significantly more likely to benefit from new construction. This suggests that "demand-responsive" approaches to water provision can entrench regressive patterns of distribution.

Key words — rural water provision, decentralization, Africa, Tanzania

Annotated bibliography (due 9th December)

- **Title** (on front page with other details, not included in word count)
- **Introduction** (about 300 words)
  - Frame with orienting research question
  - Introduce topic, its importance, three papers
- **Three Annotations** (about 300 words each)
  - Discuss each separately
  - Introduce the research aim, research design, main findings
  - Your critical assessment
- **Conclusion** (about 300 words) – Consider the articles together (their findings, their designs)
- **Bibliography** (not included in word count)

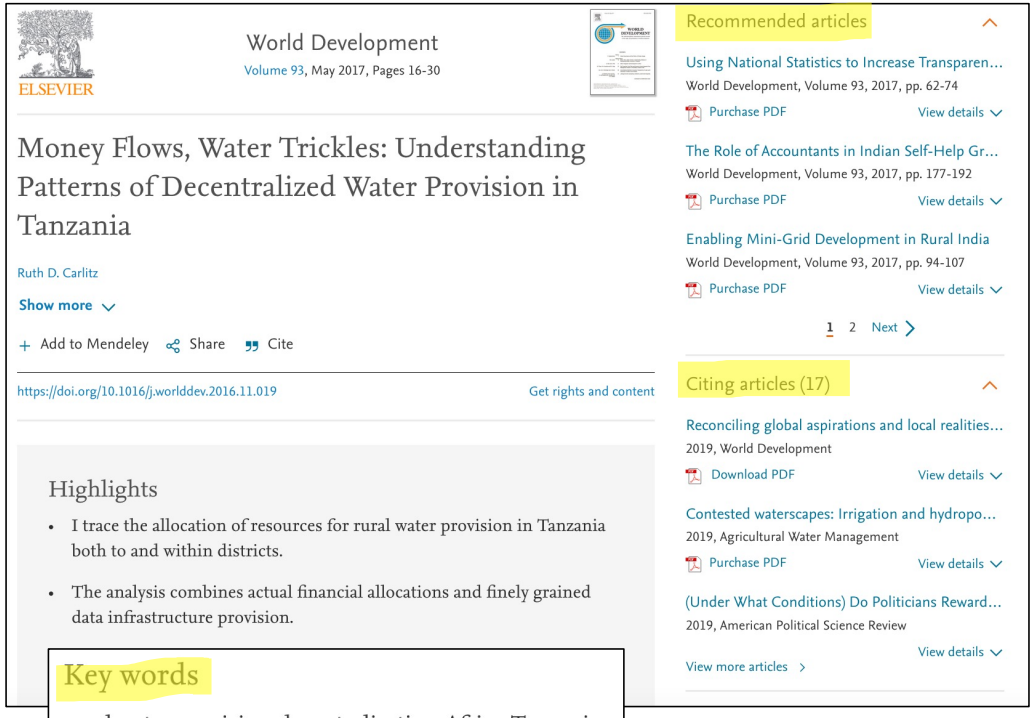
Annotated bibliography exercise

Use "Seminar Activity Handout" on Moodle

- Write an annotation for the Carlitz paper;
- Find a second paper to complement it;
- Write an annotation for your second paper;
- Write an introduction: what is your topic, why these two readings;
- Write a conclusion: what do we learn by considering them together.

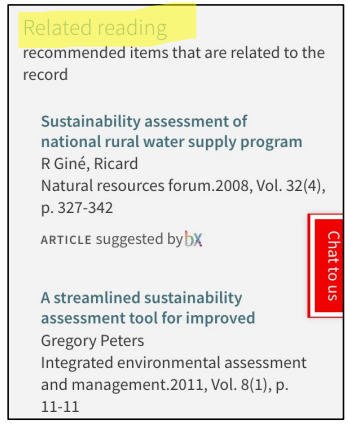
Tips

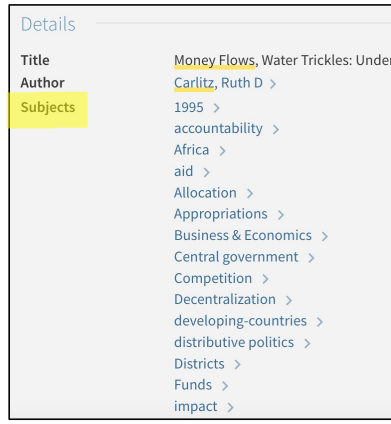
Journal Webpage



Google Scholar

LSE Library





How to read a statistical paper: Section 4 in Carlitz (2017)

- What is the empirical question?

How to read a statistical paper: Section 4 in Carlitz (2017)

- What is the empirical question? "How were the water funds allocated across different districts by the central government?"

How to read a statistical paper: Section 4 in Carlitz (2017)

- What is the empirical question? "How were the water funds allocated across different districts by the central government?"
- What are the hypotheses?

How to read a statistical paper: Section 4 in Carlitz (2017)

- What is the empirical question? "How were the water funds allocated across different districts by the central government?"
- What are the hypotheses?
  - Punishment/favoritism hypothesis
  - Hometown favoritism hypothesis

How to read a statistical paper: Section 4 in Carlitz (2017)

- What is the empirical question? "How were the water funds allocated across different districts by the central government?"
- What are the hypotheses?
  - Punishment/favoritism hypothesis
  - Hometown favoritism hypothesis
- What are the key variables (given the hypotheses)?

How to read a statistical paper: Section 4 in Carlitz (2017)

- What is the empirical question? "How were the water funds allocated across different districts by the central government?"
- What are the hypotheses?
  - Punishment/favoritism hypothesis
  - Hometown favoritism hypothesis
- What are the key variables (given the hypotheses)?
  - Dependent/outcome variable: $\log(Allocation)_{it}$.
  - Independent variables: CCM_{it} (to test punishment/favoritism hypothesis) and $MinHome_{it}$ (to test home favoritism hypothesis).

How to read a statistical paper: Section 4 in Carlitz (2017)

- What is the empirical question? "How were the water funds allocated across different districts by the central government?"
- What are the hypotheses?
  - Punishment/favoritism hypothesis
  - Hometown favoritism hypothesis
- What are the key variables (given the hypotheses)?
  - Dependent/outcome variable: $\log(Allocation)_{it}$.
  - Independent variables: CCM_{it} (to test punishment/favoritism hypothesis) and $MinHome_{it}$ (to test home favoritism hypothesis).
- What do we expect to observe?

How to read a statistical paper: Section 4 in Carlitz (2017)

- What is the empirical question? "How were the water funds allocated across different districts by the central government?"
- What are the hypotheses?
  - Punishment/favoritism hypothesis
  - Hometown favoritism hypothesis
- What are the key variables (given the hypotheses)?
  - Dependent/outcome variable: $\log(Allocation)_{it}$.
  - Independent variables: CCM_{it} (to test punishment/favoritism hypothesis) and $MinHome_{it}$ (to test home favoritism hypothesis).
- What do we expect to observe? Both `CCM` and `MinHome` are **positively correlated** with $\log(Allocation)_{it}$.

How to read a statistical paper: Section 4 in Carlitz (2017)

$$
\begin{aligned}
log(Allocation)_{it} = \alpha_{it} &+ \beta_1 Unserved_{it-1} + \beta_2 GravityDom_{it-1} \\
&+ \beta_3 AuditOpinion_{it-1} + \beta_4 CCM_{it} \\
&+ \beta_5 MinHome_{it} + \beta_6 log(Allocation)_{it-1} \\
&+ \beta_7 X_i
\end{aligned}
$$

How to read a statistical paper: Section 4 in Carlitz (2017)

Table 4. *DV = log of actual allocation to district, 2007–13*

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model
L.% Unserved	−0.17	0.11	0.10	0.10	−0.14
	(0.18)	(0.13)	(0.13)	(0.12)	(0.12)
L.% gravity schemes	0.02	0.14	0.15	0.14	0.03
	(0.22)	(0.16)	(0.16)	(0.16)	(0.16)
L.Audit Opinion	0.34***	0.14	0.13	0.14	0.16
	(0.12)	(0.11)	(0.11)	(0.11)	(0.11)
CCM MP Margin		0.09			
		(0.14)			
Minister for Water's home district		0.93**	0.94**	0.95**	0.97**
		(0.40)	(0.40)	(0.40)	(0.43)
L.Log of Funds Disbursed		0.16**	0.16**	0.15**	0.14**
		(0.07)	(0.07)	(0.07)	(0.07)
CCM Vote Share (President)			−0.17		
			(0.38)		
CCM lost dominance of district				0.19*	0.13
				(0.10)	(0.10)
Poverty Rate (2010, 1.25)					−0.31
					(0.81)
Population (log)					0.20***
					(0.08)
Area (log)					0.02
					(0.06)
Depth to Groundwater (meters)					0.03
					(0.02)
Year Fixed Effects	No	Yes	Yes	Yes	Yes
Observations	556	432	432	432	432
R^2	0.019	0.465	0.465	0.466	0.477
AIC	1877.99	1075.60	1075.81	1074.59	1073.78
BIC	1895.27	1124.43	1124.63	1123.41	1138.87

Standard errors in parentheses. The dependent variable is the log of the actual allocation to districts. All models restricted to rural districts and those for which year of construction is not missing. All models include standard errors clustered by district.

*$p < 0.10$.

**$p < 0.05$.

***$p < 0.01$.

Carlitz (2017) overview

- Part 1 (Section 4): How were the water funds allocated across different districts by the central government?
- Part 2 (Section 5): How were the funds used (measured by the number of water points) within each ward by individual districts?

How to read a statistical paper (advanced)

- Are all necessary **control** variables (covariates) included in the model?
- Are there any additional tests to assess the **robustness** of the main results?
- Are there any tests to study the **heterogeneous** effect (i.e., do the main findings change if we divide up the observations)?
- What else can be or should have been tested?