Institutions as Drivers and Responses: A Critical Assessment of Data Needs

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How do we develop data in service of improved institutional design?

Start with a policy question: what data you need depends on what question you are asking

What is missing?

How do we get it?

What other obstacles besides data problems do we face?
General Comments

- Start with policy question: data needed depends on question asked; BUT data available dictate questions one can ask.
- Institutional form and content reflect behavior & env’l quality, BUT, institutional form and content also influence behavior & env’l quality.
- Dynamics driven by (& need data on) institutional & non-institutional, endogenous & exogenous factors.
Institutions as Responses

Environmental Quality

Actors (capacities & interests)
& Behavior

Problem Structure

Institutions

Institutions as the Dependent Variable
Institutions as Drivers

Environmental Quality

Problem
Structure

Institutions

Actors (capacities & interests)

& Behavior

Environmental quality and behaviors as the dependent variables
Environmental Quality & Behavior

- Need both as indicators & influences
- What kind of data do we need?
  - Historical data streams
  - Linked to institutions
- How can we derive it from what we already have?
  - Historical & scientific publications
  - Combining disparate sources
  - Identifying experts and self-identified sources
  - Structure user-driven meta-database

Historical data streams:
  - Data is available for long time periods but NOT on the internet!
  - Examples: North Pacific fur seals, whaling from IBWS

Linked to institutions
  - Must be structured to evaluate potential institutional influence
  - Examples: FAO fisheries data

Behaviors and environmental quality
  - Behavior is necessary but not sufficient condition for environmental improvement
  - Often the thing we have data on is not the thing we are interested in
  - Example: often have data on take but interested in population

Combining disparate sources
  - Lots of data collected for non-social science questions, but still valuable
  - Example: polar bear data – easily acquired from different countries but never before combined
Institutions

- Obstacles to data we need:
  - Too many variables
  - No consensus on variables or values
  - Types more likely than variables
  - Institutional data with no related indicators

- How can we get it:
  - Reduce propagation of new variables
  - Develop typologies of institutions
  - Link environmental and institutional data
  - Think more creatively about sources
  - Systematic collection procedures
Problem Structures

- Why is data on problem structure important?
  - Left out variable
  - Systematic driver of institutions AND behavior
    - institutional features reflect problem

- How can we get it?
  - Develop typologies and operationalizations
  - Systematic collection procedures
Actors

- Features of targeted actors
  - Influence relationships between problem structure, behaviors, and institutions
  - Help explain variation across actors
  - Need to control for to evaluate institutional effects

- Much data already available
  - Economic, social, etc. indicators by country or other subunits
  - Easily linked to other data sets
Methodological Issues

- Indices and effectiveness scores – metrics for effects that are more nuanced
- Meta analyses of existing case studies – possibility for using existing work
- Sharing data sets – solving the private incentives/public goods problem
- Intercoder reliability – re-usable data sets
- Factor analysis – inductively identify types
- Exogenous variables
- Endogeneity

Intercoder reliability
   Need to learn from psychology and similar sciences

Factor analysis
   Ability to identify “types” of institutions inductively where we can’t deductively

Indices and effectiveness scores
   Many are working on this – current debate in most recent issue of GEP

Meta analyses of existing case studies
   There are lots of case studies and we could take advantage of this.
Conclusions

- Much more data is available than we use
- Think creatively about what constitutes “data”
- Build institutions to facilitate collaboration & data sharing – websites are not enough
- Collect data in service of specific research questions but develop, document, and archive data so others can use it