

### Third WINIR Conference

2-5 September 2016

Seaport Boston Hotel, Boston, Massachusetts, USA

Regulatory institutions as learning organisations:  
formulating problem and preliminary exploration

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# Outline of presentation

- Inspiration
- Parallels in institutional and organisational studies
- Problem formulation
- Evidence of learning: outcomes vs process of decision making
- Concluding remarks



# Earlier research question

What determines divergence in performance of regulated utilities in seemingly isomorphic institutions?

# Concluding remarks

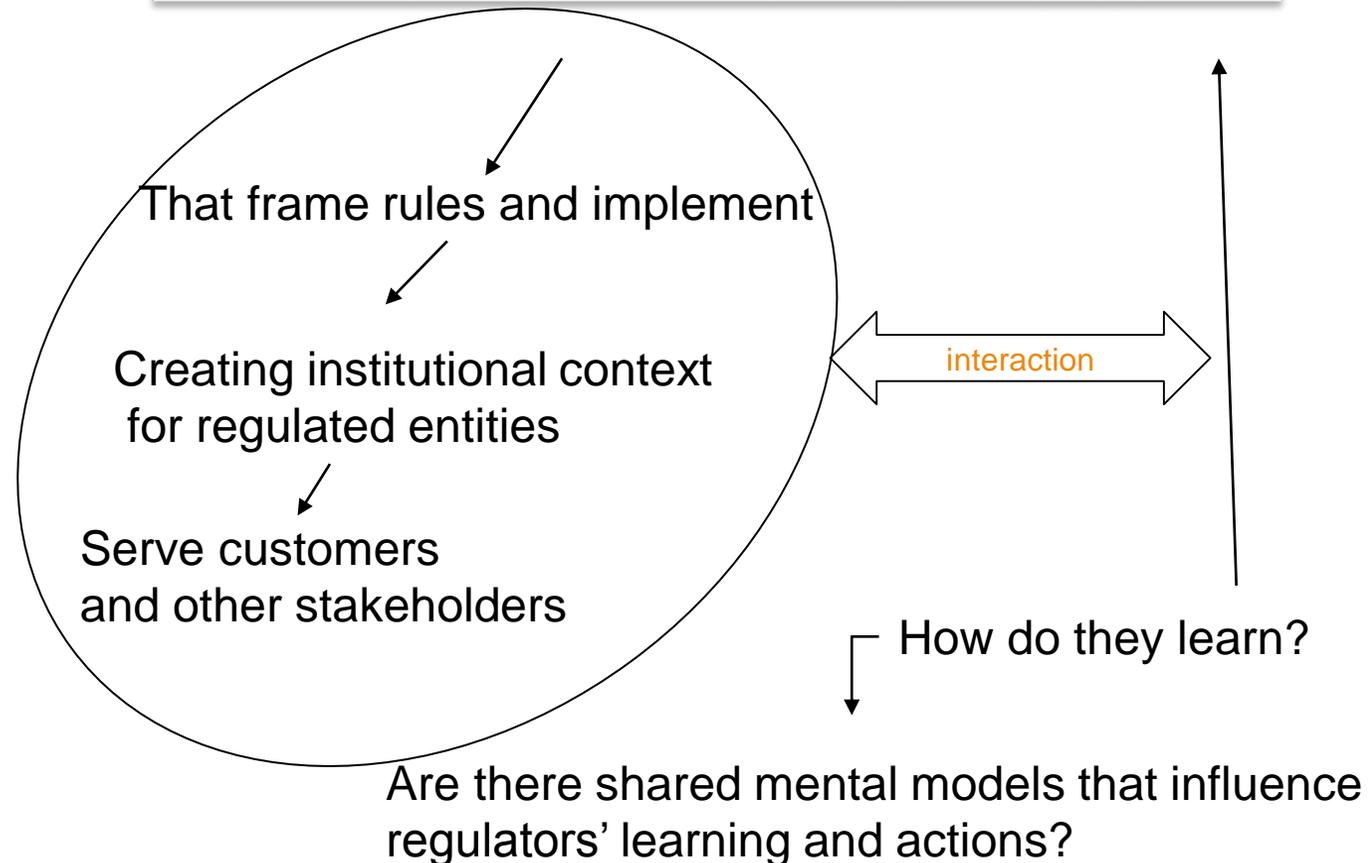
- Institutions matter
- Structure important: Gujarat example of local adaptation
- Political commitment sets the tone for institutional effectiveness
- Innovation and improvement in performance possible within public sector

# Difference between institutions and organizations

“Institutions are the rules of the game; organizations are the players. The latter consist of groups of individuals bound together by some common objective. For example, firms are economic organizations, political parties are political organizations, and universities are educational organizations. As shared mental models evolve within organizations, collective learning takes place with respect to their goals.” p.77

Mantzavinos, C., North, D.C. and Shariq, S., 2004. Learning, institutions, and economic performance. *Perspectives on politics*, 2(01), pp.75-84.

## Regulatory commissions as organizations



## Two strands in literature on learning: (a) Cognitive science adapted in institutional literature

Institutions shape the interactions (as rules) between the players so are *external to the mind mechanisms* individuals create to structure and order the environment.

Mental models are the *internal representations* that individual cognitive systems create to interpret the environment.

Denzau, A.T. and North, D.C., 1994. Shared mental models: ideologies and institutions. *Kyklos*, 47(1), pp.3-31.

## Two strands in literature on learning: (b) Role of learning in decision making

*Learning is here defined as the detection and correction of errors, and error as any feature of knowledge or of knowing that makes action ineffective.*

*Error is a mismatch: a condition of learning, matching a second condition of learning.*

*Detection and correction of error produces learning and the lack of either or both inhibits learning. (p.365)*

Argyris, C., 1976. Single-loop and double-loop models in research on decision making. *Administrative science quarterly*, pp.363-375.

# Learning enablers for organizations: institutional and organizational theories' perspectives



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Learning enablers for organizations:

Motivation

Information quality and frequency

Feedback loop

*How good is the information provided that would allow one to correct bad models?*

*That feedback is essential to learning...*

*The feedback needs to be in a form that makes its relevance to the mental models transparent, or complexity is increased further..*

Denzau and North, 1994, p.8

Single loop learning:

*Participants in organizations are encouraged to learn to perform as long as the learning does not question the fundamental design, goals and activities of their organizations.*

Double loop learning:

*Participant would be able to ask questions about changing fundamental aspects of the organization.*

Argyris, 1976, p. 367.

# Summarising similarities

Learning levels and conditions for effective learning/decisions	Denzau and North (1994)	Argyris (1976)
Learning types and role of feedback	<p>Initial mental models developed</p> <p>Revising learnt models in light of new information, experience, reflection, interaction. <i>Representational redescription</i></p>	<p>Single loop learning</p> <p>Double loop learning Revising learning in light of experience and reflection</p>
Information	Quality and frequency	Valid information
Motivation	Incentives and institutions shape/drive	Resistance to change overconfidence in past working of decisions,

# Problem defined

The question that arise:

- How individuals in regulatory organisations learn individually and collectively?
- How does regulatory actor respond to external stimuli and internal institutional structures and legacy
- What evidence can be obtained about learning?

For complex problems need for learning increases:

Feedback loop (Denzau & North)

Double learning loop (Argyris)

Analytical framework:

Mental models: individual/shared

Espoused theories-theories in use (Argyris)

Competence- Difficulty Gap (Denzau and North)

Mismatch in situational needs and learning used (Argyris)

# Evidence of learning

- **Direct observation**
  - of decision of making process
    - Meeting notes, minuets, recording of discussions, observation of actions
- **Indirect observation:**
  - Analysis of actions and outcomes of decision making process

# UK energy regulatory (indirect) evidence of learning

- 1986-1989 Initial privatization act for gas and electricity created a market structure
- Separate regulatory commission for electricity (OFFER) and for gas (OFGAS)

- Information quality improvements: regulatory accounts were required to be prepared
- Feedback loop (double loop learning):
  - Arm's length relationship with government
  - Civil society/academic participation in regulatory debate
  - Role of financial markets
- Motivation:
  - Professionally qualified staff
  - Regulator's appointment

# UK energy regulatory (indirect) evidence of learning

- Review of regulatory decision in 1995: electricity regulator revised price control after reaction in stock markets
  - 2000: Merger of electricity and gas regulatory authorities to create a single authority Office of Gas and Electricity Markets (OFGEM)
  - 2010: Review of RPI-X regulatory instrument
  - 2014-15: RPI-X replaced with RIIO model (Revenue = incentive, innovation, and output)
- Information quality improvements:
  - Feedback loop (double loop learning):
    - Regulators, academic and think tanks interacted in review of regulatory outcomes in addition to consumers and regulated entities.
    - Dynamic legislative oversight of practice of regulation and markets
    - Reactive and proactive responses to markets (mergers and acquisition), competition authorities, EU laws
  - Fundamental shift from input controls to output monitoring

# Indian electricity suppliers financial performance

Top six states on the basis of profit (subsidy received basis) in 2012-13

	Rs. Crores
Delhi	939
Maharashtra	655
West Bengal	546
Gujarat	539
Kerala	241
Punjab	51

1 Crore RS = 10  
million =  
US\$150,000

Bottom six states on the basis of losses (subsidy received basis) in 2012-13

	Rs. Crores
Andhra Pradesh	16,668
Uttar Pradesh	13,155
Rajasthan	12,510
Tamil Nadu	11,827
Madhya Pradesh	4,474
Haryana	3,834

→ Loss \$1.87 billion

(Annexure 1.5.1 to 1.5.3)



# India energy regulatory (indirect) evidence of learning



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- 1998: Central electricity regulatory commission set up
- 2000-2005 Many state electricity regulatory commissions set up
- 2006: Petroleum and Natural Gas Regulatory Board set up
- 2013: Coal Regulatory Authority created

- Information availability and quality very poor
- Feedback loop (double loop learning):
  - No arm's length relationship with government
  - Civil society/academic participation in regulatory debate weak evidence
  - Role of financial markets: negligible
- Motivation:
  - Political appointments to regulation
  - Deputation from other government departments

# India energy regulatory (direct) evidence of learning and not learning in two states

- Gujarat State Regulatory Commission:

- Meeting challenge of subsidy
  - Separation of grids
  - Controlled supplies for irrigation
- Encouraged economic rationalisation of supply
  - Allowed financing costs
  - Reasonable investments in infrastructure
- Better reporting and information gathering
- Professionalisation of regulatory staff
- Ongoing dialogue with different stakeholders

- Information improving
- Feedback loop (double loop learning):
  - Arm's length relationship with government
  - Civil society/academic participation in regulatory debate weak evidence
  - Role of financial markets: negligible
- Motivation:
  - High due to lack of interference from state
  - Professional development
  - Free to experiment

# India energy regulatory (direct) evidence of learning and not learning in two states

- Rajasthan State Regulatory Commission:
- Government departmental culture (mental models)
  - Little use of the autonomy enshrined in the enabling act
  - Appoint people from within the sector
- No revision of tariffs for few years

Why?

*“Because chief minister made a public announcement that electricity prices will not change during his term.”*

Not claiming cost of capital in revenues:

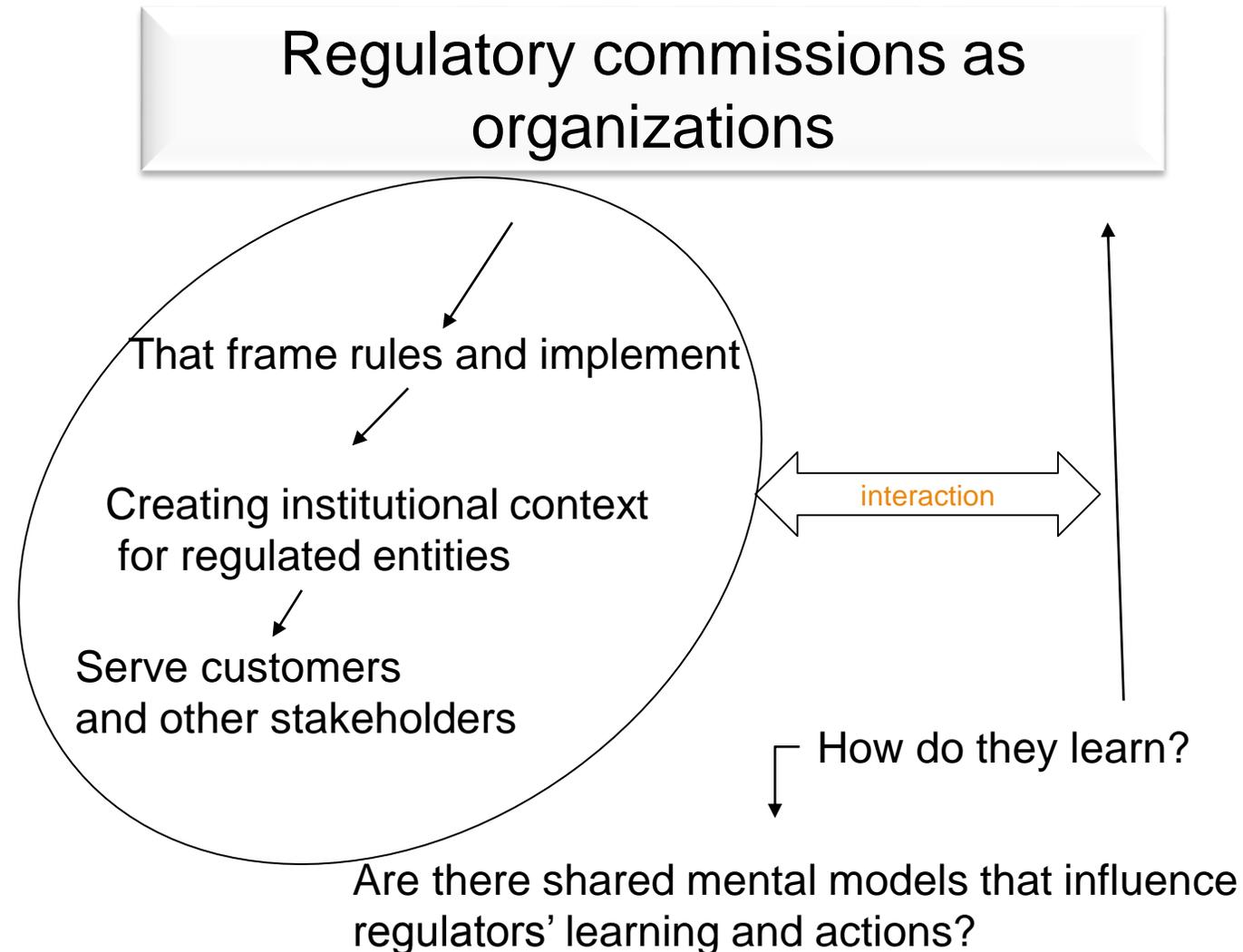
*“in the absence of recovery of full revenue gap from the revised tariff, claiming return on equity would unnecessarily inflate the revenue gap”* Distributor.

*“Commission agrees that considering the revenue gap even after tariff revision, the inclusion of RoE would only increase this. Even otherwise, the Commission would not like to burden the consumers if licensee itself is not claiming RoE”* Regulator

Publicly funded utilities model prevails in minds of distributors and regulators

# What explains better learning in UK working of energy regulators compared to Indian regulatory organizations

- UK historical review of changes in energy regulations shows relative more effective learning regulators compared to Indian regulators
  - Better quality information
  - Stronger and effective interaction among participants enabled by wider institutional context (think tanks, universities, effective legislative debates)
  - Arm's length relationship with state enabling professionalization of service



Thank you for your attention