P17 / Data Center Development: Actors, Ideas, and Institutions

Topic : Politics, Institutions and Political Regimes

Chair : Kris Hartley (Arizona State University)

Second Chair : Jonathan Fisk (University of Utah, USA)

Third Chair : Susan Opp (University of Missouri- Kansas City)

GENERAL OBJECTIVES, RESEARCH QUESTIONS AND SCIENTIFIC RELEVANCE

The rapid expansion of hyperscale and AI-serving data centers is generating political and policy conflicts that raise questions about governance of emerging technologies. Inherent to this rapidly evolving policy issue are tensions and tradeoffs around the distribution of benefits and costs. On one hand, data centers consume vast amounts of energy, generate thermal and electronic waste, and may require extensive water use for cooling and electrical generation. They also pose infrastructure, environmental, and fiscal challenges for governments with limited administrative or technical capacity and for stakeholders including ratepayers, developers, and others impacted by sustainability concerns. On the other hand, data centers power AI and other digital technologies that can increase efficiencies and accelerate innovation related to energy and sustainability. They have also been promoted as catalysts for local economic development and global technological competitiveness.

These tensions point to a broader public policy challenge: governments are being asked to govern rapidly scaling technological infrastructure through arrangements designed for very different or outdated forms of development. This creates an opportunity to examine how governments leverage institutions, capacities, and policy tools for technologies whose fiscal, environmental, and social consequences emerge faster than existing regulatory arrangements can adapt.

This panel brings together scholars working across methodologies and topical domains to examine how current understandings of governance can explain emerging patterns of data center governance and identify where existing theories, concepts, and methods require further development. The intent is to chart a pathway for an emerging research subfield around the governance of physical infrastructures supporting AI. The panel approaches data center governance through three angles that each constitutes its own subpanel: actors, ideas, and institutions. Drawing on Hall and others (1997) and the ‘three institutionalisms,’ these perspectives direct attention to complementary dimensions of governance: how interested parties use resources and power; how problems, solutions, and forms of expertise acquire meaning and legitimacy; and how rules, authority structures, and institutional legacies constrain or enable action.

The following questions guide each panel:

1. Actors panel

a. Who is involved in decisions about data centers, and whose interests are represented or excluded?

b. What are the power dynamics and imbalances among these actors?

c. What are the prevailing interests and narratives in policy discourses?

d. How do actors mobilize resources to influence policy decisions?

2. Ideas panel

a. How are data centers framed as policy problems or economic opportunities?

b. What ideas, narratives, and assumptions shape how policymakers understand costs and benefits?

c. How does the rise of AI data centers alter existing policy paradigms around technology?

d. What forms of knowledge and expertise are privileged, and how do various forms of knowledge interact or conflict?

3. Institutions panel

a. How do existing institutional arrangements shape regulatory decisions about data centers?

b. How are responsibilities for data center governance distributed across jurisdictions and levels of government?

c. How do institutions mediate conflicts among concurrent objectives like economic development, energy reliability, and community interests?

d. How do institutional legacies and entrenched policymaking structures shape capacity to manage AI infrastructures?

CALL FOR PAPERS

This panel invites paper proposals across all three subpanels, examining the governance of data centers and the physical infrastructures that support AI and advanced technological applications. We are particularly interested in papers that move beyond documenting the expansion or impacts of data centers and instead use data center development as an empirical or theoretical setting for advancing broader understandings of public policy, governance, technological transformation, and institutional change.

We welcome contributions engaging one or more of three analytical perspectives: actors, ideas, and institutions. Papers addressing the actors dimension may examine interests, strategies, resources, and power among governments, corporations, utilities, communities, civil society organizations, or other stakeholders involved in data center development and governance.

Papers focused on ideas may explore how data centers and their challenges are framed as policy problems, how trust is developed and/or lost, how competing narratives shape related policies, and how different forms of expertise and knowledge influence decision-making.

Papers addressing institutions may examine topics like regulatory regimes, jurisdictional/governance arrangements, permitting processes, institutional legacies, policy instruments, or emerging forms of governance innovation.

Across these perspectives, we encourage papers asking whether existing governance arrangements are sufficient for managing the rapid build-out of AI infrastructure, whose interests and ideas shape policy choices, how institutional arrangements distribute authority and benefits, and when new governance approaches emerge.

Comparative studies across cases, jurisdictions, levels of government, and national contexts are especially welcome, as are studies using a mix of methodological approaches (i.e., qualitative, quantitative, and experimental).

The panel also seeks papers that connect the three perspectives (actors, ideas, institutions) rather than treating them as individual dimensions. For example, proposals may examine how actors mobilize ideas to pursue their agendas within institutional constraints or to reshape institutional structures, how institutional designs and structures provide advantages to some actors and ideas over others, and how the rise of AI challenges established policy paradigms and norms. Such work can help explain not simply what governments are doing in response to data center development, but why particular governance arrangements, policy choices, and outcomes emerge.