



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

## International Workshop

# ENERGY AND STATE CAPACITIES IN BRIC COUNTRIES

21-22 September 2017

Schader-Forum

Jean Monnet  
Centre of Excellence



Schader Stiftung



Alexander von Humboldt  
Stiftung/Foundation

When Goldman Sachs released its report about the emergence of middle income countries (notoriously known as BRIC), three of the main aspects emphasized were the size of the middle class, the availability of energy resources, and the potential of these new consumption markets for the future of global investments. However, not so many things were said about the role of state during the last 30 years of deep institutional reforms which took place in the Global South. Which kind of state capacity theory can be produced to explain the meteoric rise of these new emerging economies?

Perhaps one of the most relevant aspects of infrastructure for understanding the state capacity of BRIC countries is energy policy. First, energy security is geopolitically important for each of the BRIC. Second, energy policy is a tool that BRIC have used to cushion social and economic shocks, using the price of energy inputs to moderate inflationary fluctuations and public account numbers. Third, Brazil, Russia, India and China all share certain traits with respect to their energy supply chain's productive structure. The fiscal crisis in the 1980s has established a path dependence which found great affinity with an agenda of state government divestment in the sector, internationally stimulated by multilateral banks. Energy sector policies in each of these countries have been submitted to the brand of neoliberal market-oriented reform that was typical of the 1990s. One decade later, however, the state was back again, assuming relevant coordinate role on energy policies.

The study of energy in BRIC countries involves not only an evaluation of the physical infrastructure but also financing and bureaucratic support as important determinants of state capacity. Infrastructure facilities demands large investments which usually exceed budgetary capacities and electoral cycles. Implementation depends less on the government's horizon and fundamentally more on bureaucratic structure and stable financial mechanisms. The comparative political economy literature has emphasized, in conceptual terms, the role of national finance structures and seeks to show the advantages from a system coordinated by policy banks' loans as a useful instrument to overcoming technology lags in production regimes. Such studies have emphasized the role of institutional complementarities among domestic systems of financing, industrial and labor relations,

and innovation to describe specific trajectories of development. In general terms, the main goal of this conference is gathering the commonalities in terms of the domestic institutional complementarities among BRIC countries based on analysis of the energy infrastructure of these countries.

## Programme

Thursday, 21 September 2017

1:00 pm	Welcome
1:30 pm	<p><b>Part 1</b></p> <p>Prof. Dr. <b>Michèle Knodt</b>  <b>Topic: Challenges of BICS-EU Energy Cooperation</b>          BICS and the European Union are greatly challenged on the issue of energy and closely interlinked also on climate change, both areas which will demand changes in energy production, consumption patterns etc. These challenges could lead to competition between the actors in the request for resources. At the same time, such a common situation could entail great potential for a closer cooperation. However little indicates for such closer cooperation. Thus, the aim of presentation is to understand which mutual perceptions the EU and China have in energy policy. How does the external energy governance of the EU and China function? Which mutual perceptions do both sides hold and which controversies exist?</p> <p>Prof. Dr. <b>Sunil Tankha</b>  <b>Topic: State Capacity and Reform Choices in the Electricity Industries of Brazil and India</b>          In spite of their overall similarities as large federally structured democracies with meritocratic and semi-autonomous administrative corps, Brazil and India's electric power industry structures and reform choices remain very distinct. In this presentation I explore three themes, using empirical illustrations, comparing and contrasting the Brazilian and Indian experience with managing and attempting to reform their electricity industries: 1) The interests and relative political powers of different classes of electricity customers in the two countries; 2) Their negotiation positions and relative powers with respect to important international actors; and 3) The relationship with domestic industrial groups. Investigating these three</p>



	<p>parameters provides both explanatory and predictive narratives which may be useful for further theorizing.</p> <p><b>Dr. Elizabeth Chatterjee</b></p> <p><b>Topic: Electricity and India's weak-strong state</b> In 1991 India's 'big-bang' economic opening began with private investment in electricity generation, initiating a quarter-century of institutional reforms in the power sector. This paper uses these power reforms to explore the reinvention of the interventionist state and its limits. Indian electricity governance is shared between the central and provincial (state) governments, constraining the trajectory of reform. Rather than outright deregulation, the reforms thus grafted a dependent private sector and regulatory agencies onto the existing public system. The state remains the dominant player but, thanks to this constrained reform process, the resulting state-market hybrid demonstrates distinctive forms of financial and administrative dysfunction. A 'headless state' led to policy incoherence and allowed interest-group competition to play out within the state itself.</p> <p><b>Dr. Carlos Henrique Santana</b> Topic: <b>Semiperipheral varieties of capitalism: state capacities and energy policies in BRIC</b> In order to understand the performance of BRIC's energy policies and their potential impacts on global geopolitics, it is fundamentally important to evaluate the institutional complementarities of the production chains of these countries, situating the state as a strategic actor capable of coordinating increasing returns. In spite of historical, institutional, geographical and economic differences between these countries, there are a set of institutional complementarities surrounding energy policy decision-making practices which are relatively similar and can create an opening for hypotheses concerning the state capacities in the semi-periphery.</p>
4:00 pm	Coffee break
4:30 pm	<p><b>Part 2</b></p> <p><b>Prof. Dr. Mauricio Tolmasquim</b> Topic: <b>Brazilian Electricity Policy</b> As South America's largest country, covering over 8 million km<sup>2</sup>., Brazil it is the world's fifth largest country: only Russia, Canada, China and the U.S. are larger. Governments around the world, Brazil included, are preoccupied in promote reductions in greenhouse gases. Brazil has, as few countries do, privileged conditions in this respect. Brazil's abundance of renewable and non-renewable energy resources provides the country with a comparative advantage in terms of meeting its objectives for energy security and environmental sustainability. In this</p>



presentation, I will present the renewable energy auctions that is allowing Brazil to growth the GDP maintaining its clean electricity mix.

**Prof. Dr. Caetano Penna**

Topic: **'Mission-oriented' innovation policies: challenges and opportunities for Brazil in the energy and environment domain**

The presentation will draw on the report by Mazzucato and Penna (2016), discussing challenges and opportunities for Brazil to implement mission-oriented innovation policies in the energy and environment domains. It will also discuss the results of a relatively successful sectoral mission-oriented programme to promote the development of second generation ethanol-production technologies, the so-called *PAISS* programme, which was conceived and executed by the Brazil's development bank BNDES and innovation agency FINEP. Finally, the presentation will raise lessons from the conceptual and empirical discussion that can help middle income countries that seek to develop mission-oriented policies to promote energy security and environmental sustainability.

**Prof. Dr. Kathryn Hochstetler**

Topic: **Green Industrial Policy and the Renewable Energy Transition: Can it be Good Industrial Policy?**

Renewable electricity gained political momentum from a "green spiral" where self-interested industry actors joined and thus reinforced a broader political coalition with actors seeking renewable energy for other ends, such as reducing greenhouse gas emissions (Zysman and Huberty). Can such a dynamic also drive a renewable energy transition in later adopters, especially in emerging powers? This paper examines the green industrial policies of Brazil and South Africa, which have included both demand and supply side policies from government procurement auctions to public finance and local content requirements. It concludes that a green spiral of significant economic and environmental outcomes was achieved only in the Brazilian wind power sector and looks deeper into the policies and their results to explain the weaker results for solar power in Brazil and both sectors in South Africa.

6:30 pm

Workshop Dinner at Wilhelminenhof  
Wilhelminenstrasse 50  
64285 Darmstadt



Friday, 22 September 2017

9:00 am	Welcome
9:15 am	<p><b>Part 3</b></p> <p><b>Prof. Dr. Bo Kong</b></p> <p>Topic: <b>Energy Infrastructure Financing in China</b></p> <p>This presentation will explain how the China Development Bank (CDB), a policy bank established in 1994 under the direct jurisdiction of the State Council of the People's Republic of China, has evolved to become the backbone of the country's energy infrastructure development over the past two decades. Specifically, it will examine the magnitude, motivation, and mechanism of the CDB's financing for the massive energy infrastructure buildout in China that has undergirded the country's rise as both the world's second largest economy and the world's largest energy consumer and clean energy (wind, solar and nuclear power) investor. Further, it will explore the state priorities and institutional pathways that have forged the CDB's dominance in energy infrastructure financing in China. Finally, before it concludes it will briefly touch on the CDB's rise in global energy infrastructure finance thanks to Beijing's implementation of the going out strategy since the new millennium and the "One Belt One Road" (OROR) initiative since 2013 under President Xi Jinping.</p> <p><b>Dr. Peter Rutland</b></p> <p>Topic: <b>The political economy of energy in Russia</b></p> <p>Russia has many of the characteristics of a "petrostate" – sluggish growth in non-energy sectors due to an over-valued currency (the "Dutch Disease"); vulnerability to fluctuations in the global oil price; centralization of political power; institutionalized corruption; and a propensity to engage in wars. There is a debate over the dynamics behind the role of energy in Russia's foreign policy. Some argue that Russian policy is driven by strategic concerns, with Moscow trying to use energy as a weapon to advance its political agenda. On the other side, there is the argument that Gazprom and the oil companies are merely seeking to maximize profits (subject to political constraints) like any other commercial corporation. There is also a third argument – that bargaining over Ukrainian gas deliveries, or whether to build new export pipelines, are made by a narrow circle of individuals with close ties to President Vladimir Putin, who seek to maximize the flow of rents into their personal offshore bank accounts, and use these networks to advance Russian foreign policy goals.</p> <p><b>Dr. Yuri Kasahara</b></p> <p>Topic: <b>Bootstrapping industrial upgrading in Brazil: O&amp;G local content policy and the emergence of a new corporate production system</b></p>

	<p>The 1998 local content requirements (LCR) in the oil and gas sector evolved from voluntary offers by oil companies to detailed lists covering a broad array of equipment and services based on a rationale of securing demand and creating new opportunities for firms operating in Brazil. Despite controversial implementation and boom and bust results in promoting specific sector such as the shipbuilding industry, we argue that LCR effectively contributed to the consolidation and strengthening of links between oil companies and the different tiers of suppliers operating in the O&amp;G sector, forming an emergent corporate production system (CPS). Empirically, our paper combines survey data collected from 557 suppliers of the Brazilian O&amp;G sector with case studies of companies in different tiers of the supply chain – two large foreign providers of subsea equipment and some of their suppliers and a cluster of small size companies, originally suppliers for the steel industry, that became suppliers for the shipbuilding industry.</p>
12:15 am	Lunch and end of the workshop

The panels discussion will take place at:

Schader-Forum  
Goethestraße 2  
64285 Darmstadt