

# Introduction and Overview

David G. Victor

# Program on Energy and Sustainable Development

- Three Research Platforms
  - Electricity Markets
  - Geopolitics of Natural Gas
  - Rural Energy
- Network organization: Stanford and many other research institutions
- New courses and training

# Five Critical Developing Countries

Country	Populat'n	Income <small>(GDP/cap \$, PPP)</small>	GDP <small>(billion US\$)</small>	Power Supply <small>(Twh)</small>	Gen. Capacity <small>(Gw)</small>	Dominant Fuel	New Fuel
Brazil	170m	7625	595	332	69	Hydro (88%)	Gas (0.2%)
China	1262m	3976	1079	1240	294	Coal (78%)	Gas (0.4%)
India	1016m	2358	456	527	108	Coal (75%)	Gas (6%)
Mexico	98m	9023	575	192	39	Oil (47%)	Gas (18%)
South Africa	43m	9401	126	200	40	Coal (93%)	Gas (0%)

# Political Economy of Reform: Institutional, Legal, Political Dimensions

- Dominance of State-Owned Enterprises (SOEs)
- Special Roles for Legal Institutions
  - Substituting law for direct administration
  - Creation of independent regulators
- Simultaneous broader economic reforms
  - Judicial reforms
  - Corporate governance
  - Financial markets
  - others

# Attributes of SOEs: Governance

- Insider governance
- Little attention to opportunity costs of investment
- Direct monitoring by line ministries
- Administratively determined or negotiated prices, inputs, production levels
- Poor, idiosyncratic, and opaque accounting

# Attributes of SOEs: Finance

- Soft budgets
- Direct state financing
- Indirect state financing
  - State control over domestic savings, capital markets

# Attributes of SOEs: Industrial Organization

- Public interest = state interest = firm interest
- Competition viewed as wasteful
- Single firm monopolies and franchises
- Prices and quantities negotiated politically

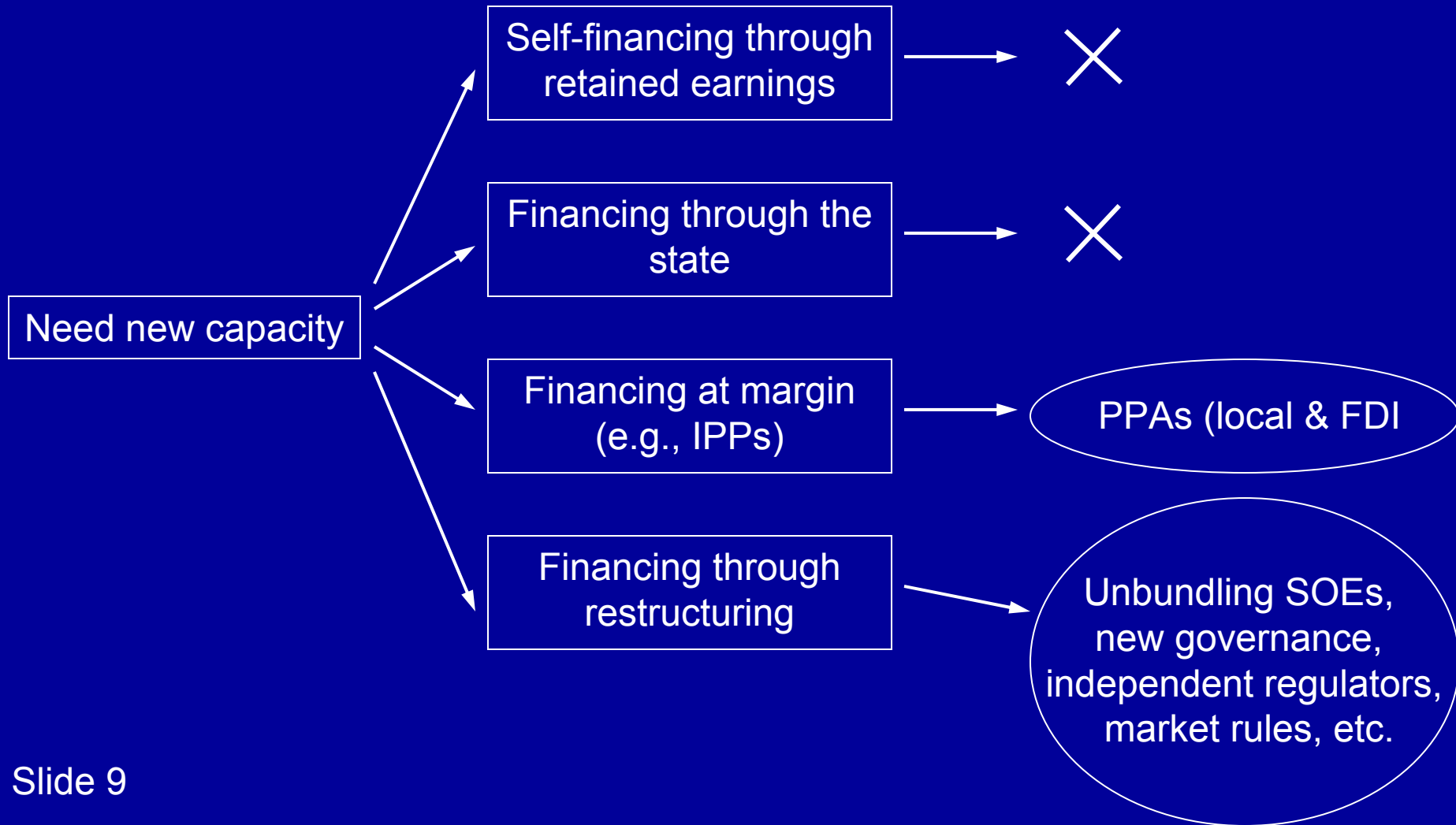
# Attributes of SOEs: Policy

- Policy embedded in the “firm”
- State and civil society and firm conceived as integrated unit.
  - Social contract embedded within the firm
- Firm supplies multiple functions
  - Social safety net
  - Shopping, child care, etc.
- Policies opaque to outsiders
  - Difficult to measure and enforce compliance

# Motivations for Reform

- Economic Efficiency
- Crisis in Finance
  - Often supply
- Broad-based restructuring
- Re-allocation of assets
- Reform as a “trend”

# Electric Power Restructuring: Financing Options

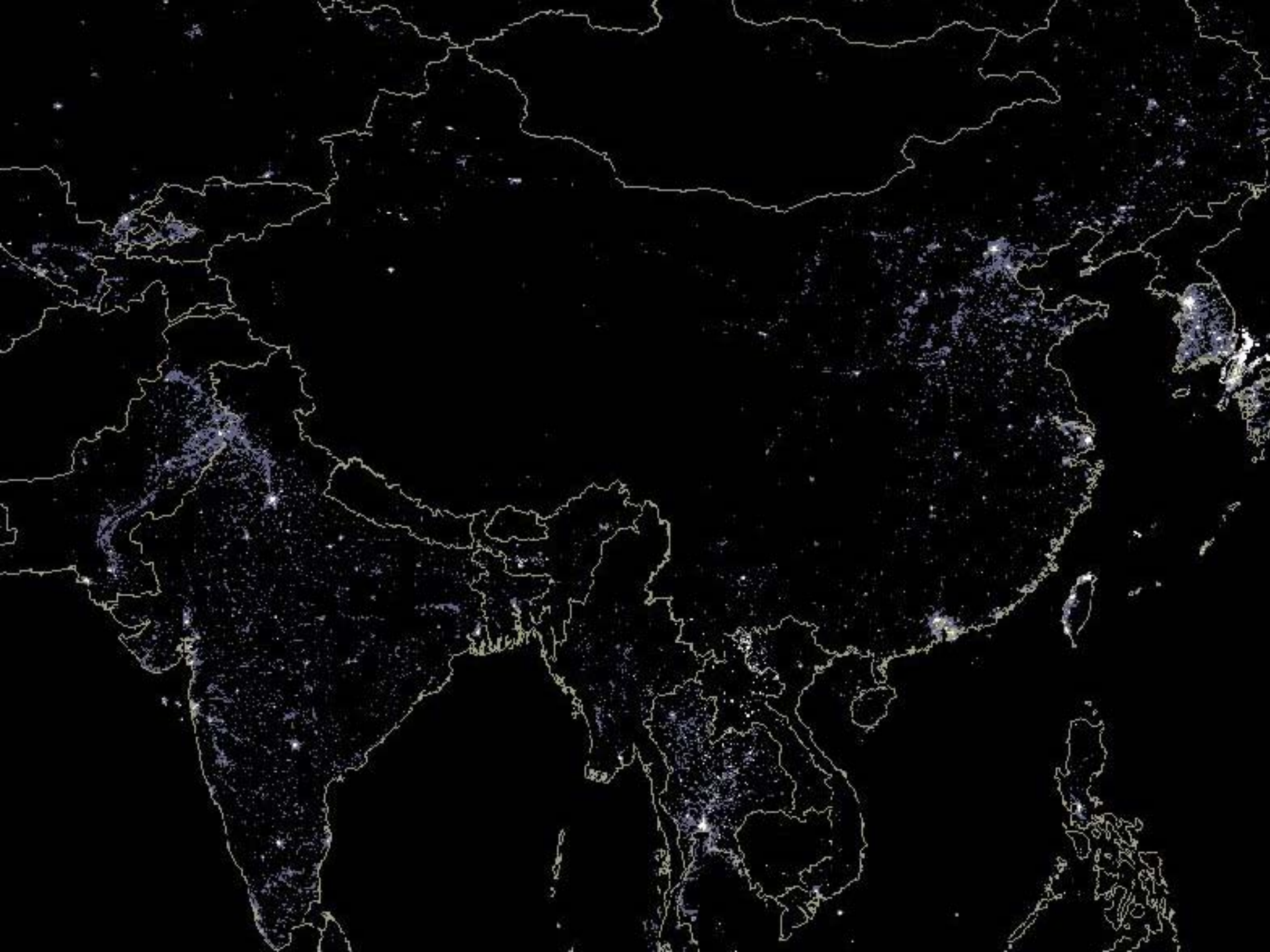


# Five Critical Developing Countries

Country	Populat'n	Income (GDP/cap \$, PPP)	GDP (billion US\$)	Power Supply (Twh)	Gen. Capacity (Gw)	Dominant Fuel	New Fuel
Brazil	170m	7625	595	332	69	Hydro (88%)	Gas (0.2%)
China	1262m	3976	1079	1240	294	Coal (78%)	Gas (0.4%)
India	1016m	2358	456	527	108	Coal (75%)	Gas (6%)
Mexico	98m	9023	575	192	39	Oil (47%)	Gas (18%)
South Africa	43m	9401	126	200	40	Coal (93%)	Gas (0%)

# Reform Strategies

Country	Strategy
Brazil	Privatization for investors. Sell distribution companies then generation companies
China	Reform at the margins (IPPs) then corporatization
India	Reform at margins (IPPs, state power corp) then restructure markets then privatize distribution
Mexico	Reform at the margins (IPPs) then (hopefully) full competition
South Africa	Social benefits of electrification then corporatization then (maybe) privatization



# Final Thoughts

- Importance of institutional, legal and political dimensions of reform
- Strategies for reframing social contract while system is in transition
- Technological Change and Industrial Organization