





1. independent regulatory institutions

2. focus on competition

3. incentive based regulation of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economy: and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economics. (1986) Fallacy of the mixed economics and policy. London: Institute of Economic Affairs, 2. (1986) Fallacy of the mixed economics and policy. (1986) Fallacy of the mixed economics an

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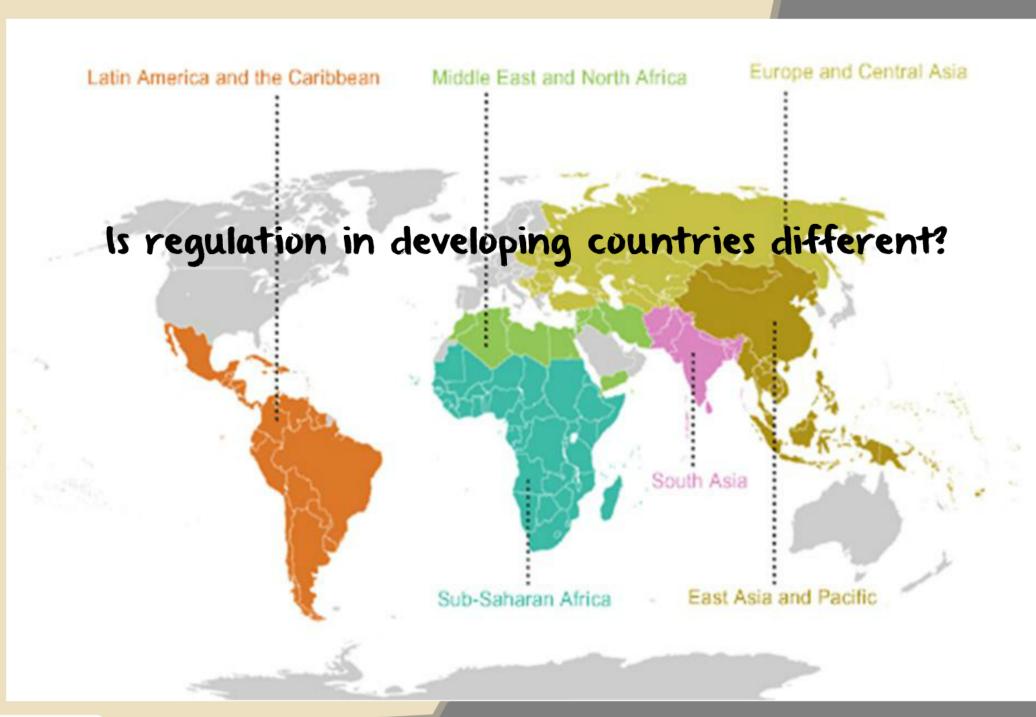
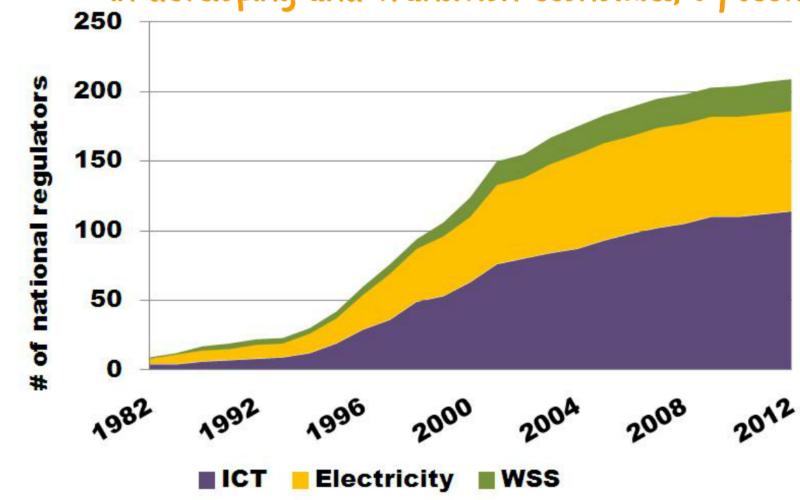


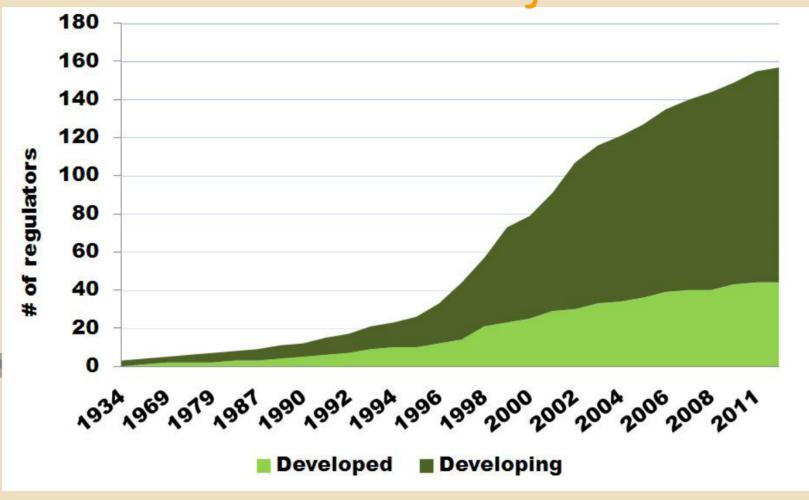
Exhibit I: The rise of regulatory agencies in developing and transition economies, by sector



Sources: ITU (ICT); authors' database (electricity and WSS)



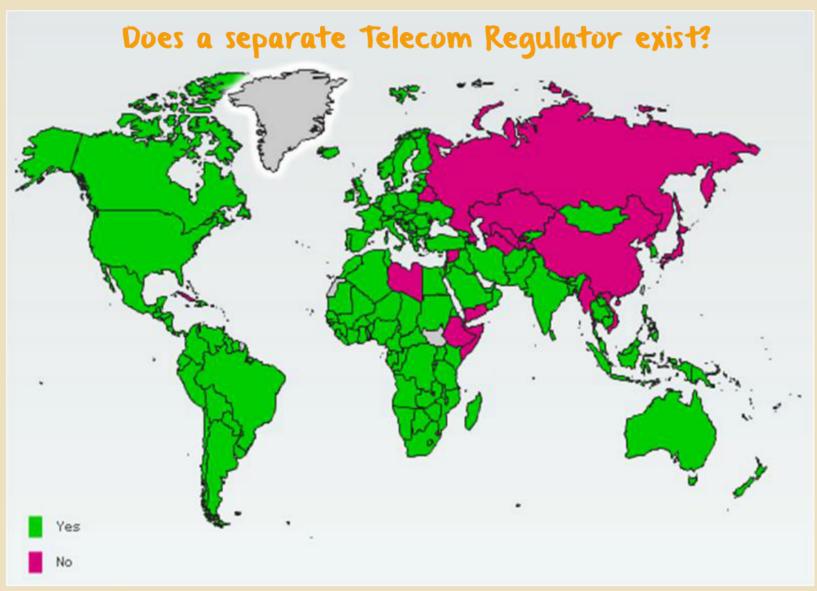
# Developing countries have overtaken developed ones in number of telecom regulators ...



Source: ITU

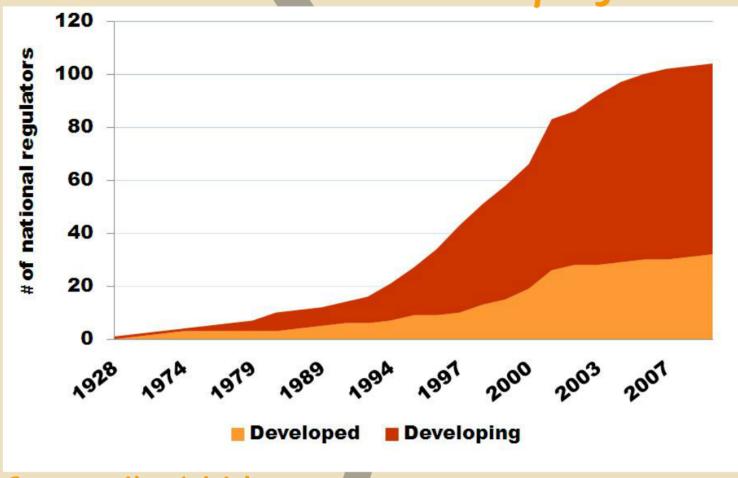






Source: ITU

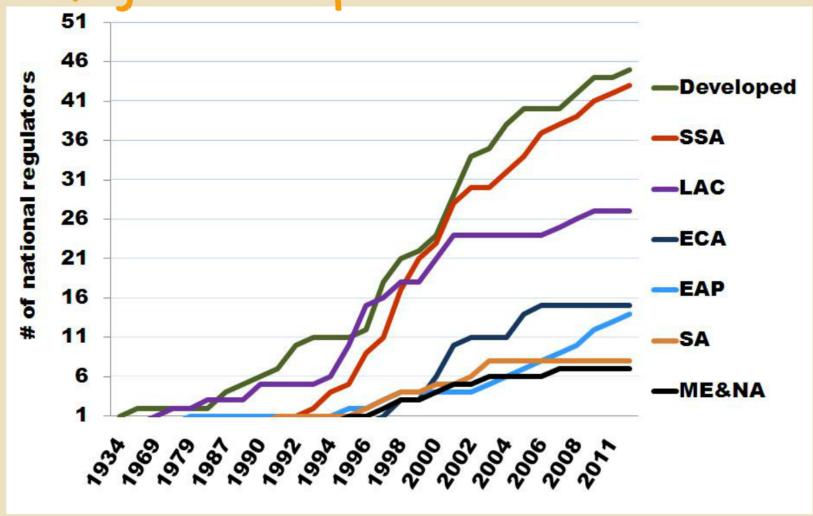
## ....and in number of electricity regulators



Source: authors' database

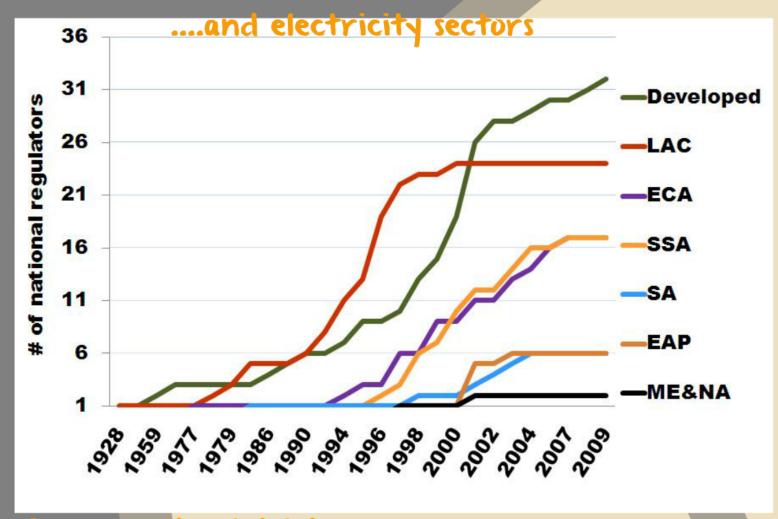


## Regulators adopted in waves - in ICT ...



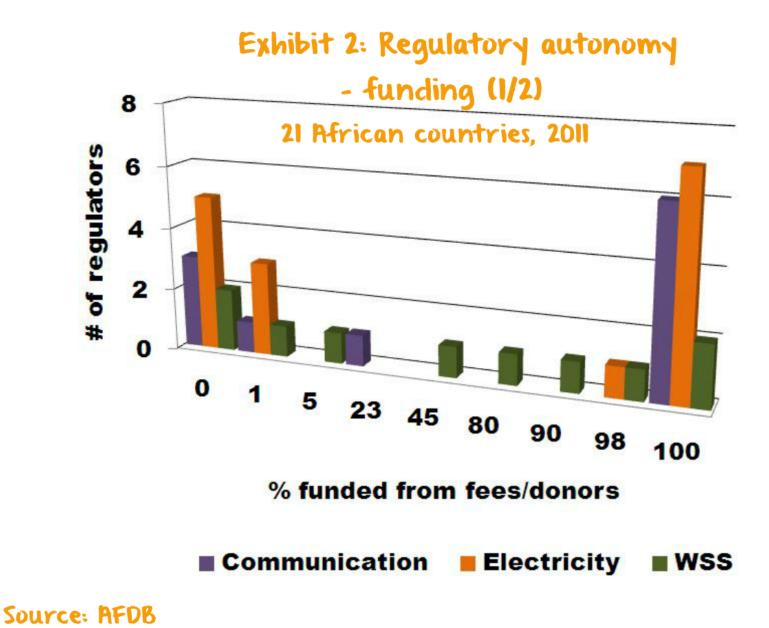
Source: ITU



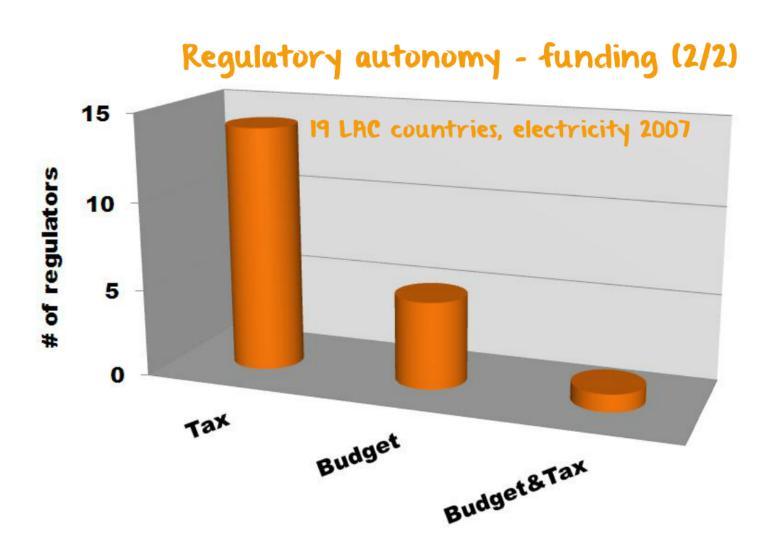


Source authors' database



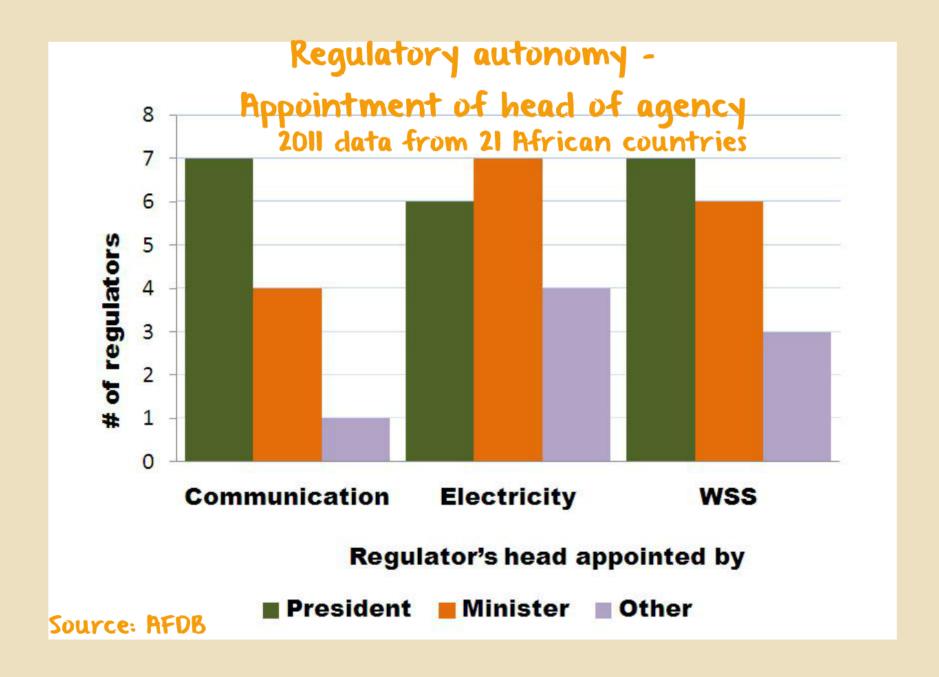




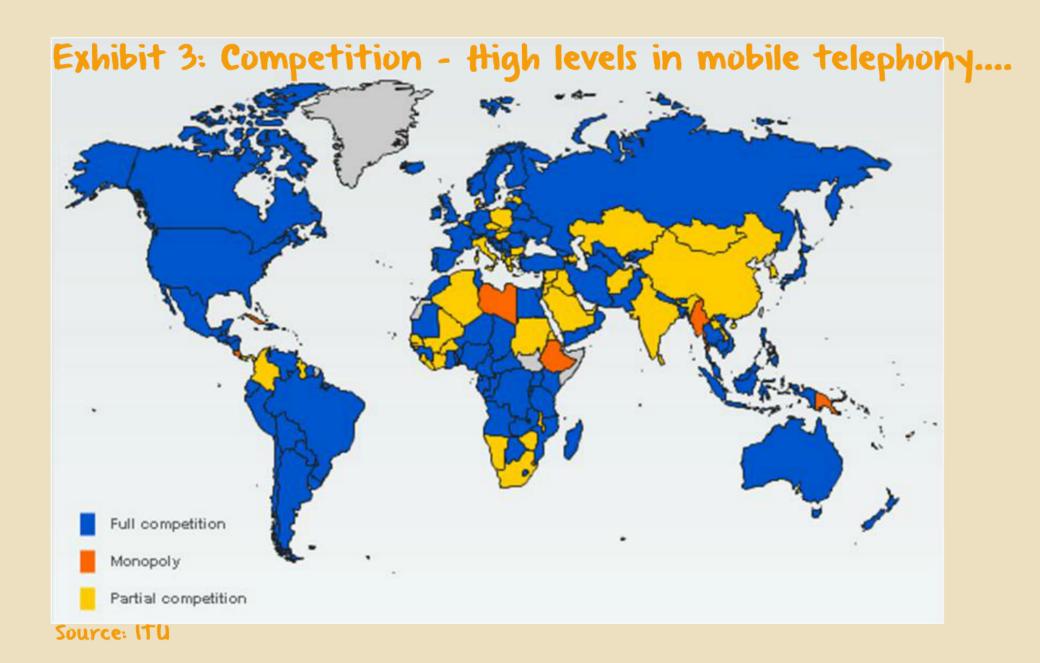


Source: Andres, 2007

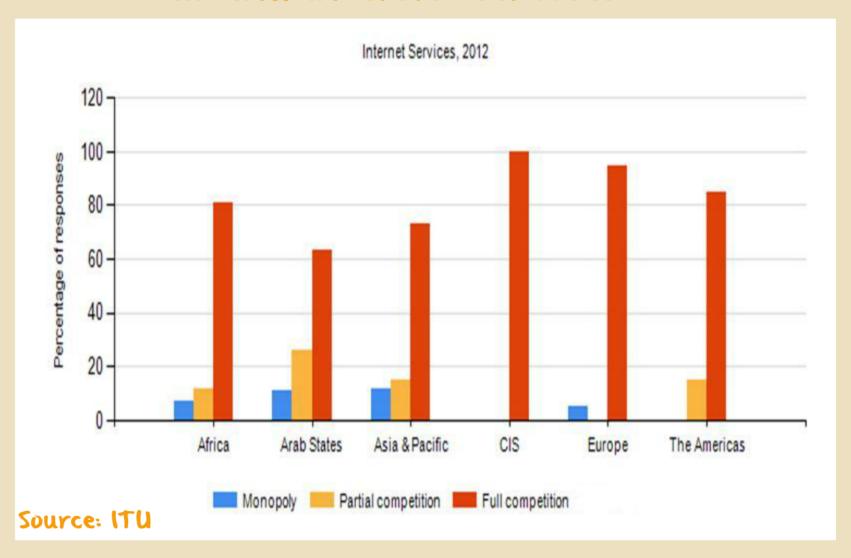




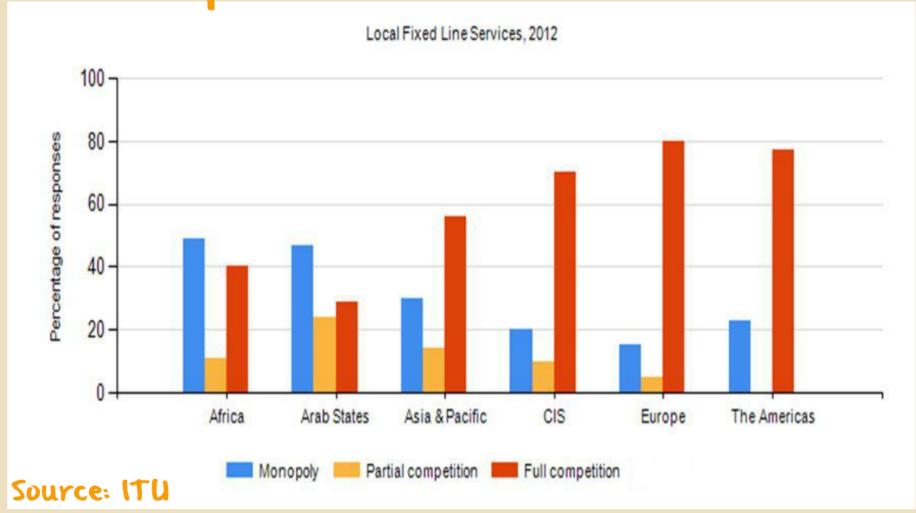




#### ... and internet services

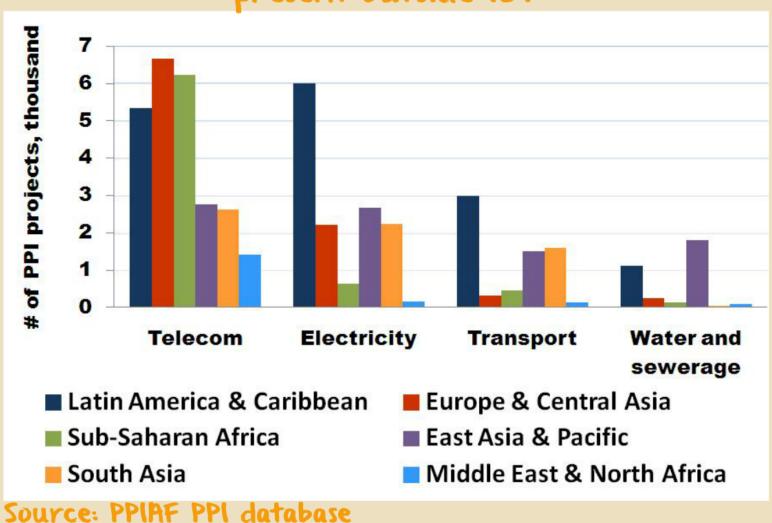


## Less competition in fixed lines services





# Competition and private sector participation less present outside ICT



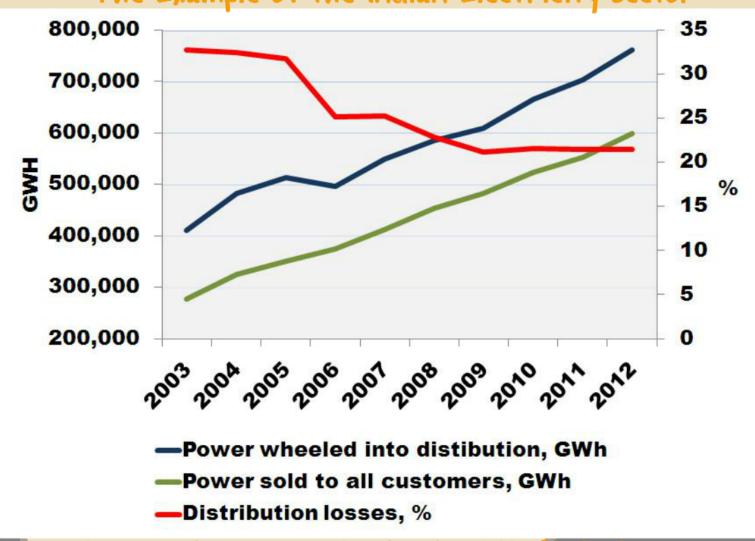


# Exhibit 4: Efficiency and Incentives





# Exhibit 4: Efficiency and Incentives The Example of the Indian Electricity Sector



Source: Source: authours' calculations based on PFC of India data



#### Regulation and reform in the Indian Electricity Sector

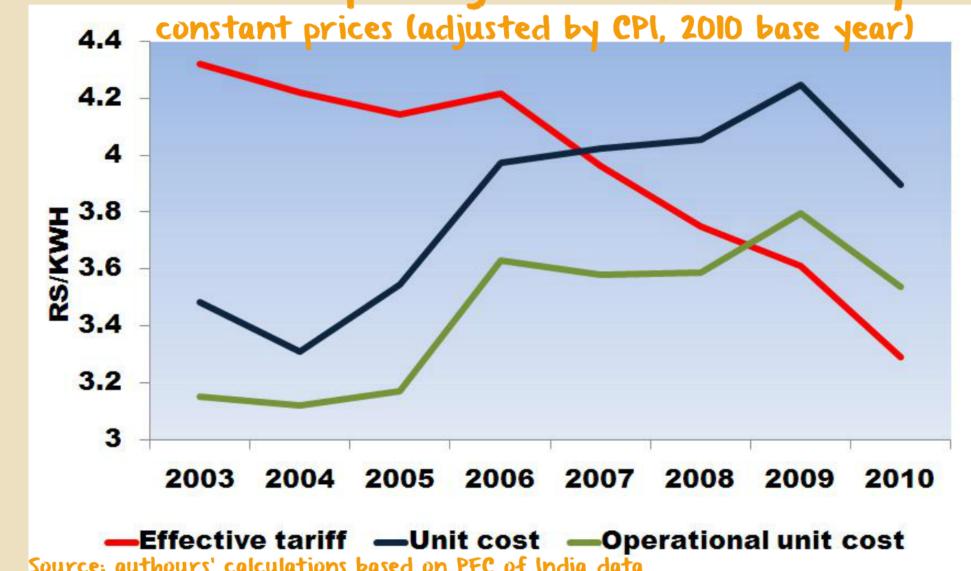
Table III - Status of Reforms & Restructuring in States as on 20th June, 2013

40	Milestones	Arunachal Pradesh	Andhra Pradesh	Assam	Bihar	Chattisgarh	Delhi	Gujarat	Goa	Haryana	Himachal Pradesh	Jammu & Kashmir	Jharkhand	Karnataka	Kerala	Meghalaya	Manipur	Mizoram	Maharashtra	Madhya Pradesh	Nagaland	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	Uttarakhand	West Bengal	Total
1.0	SERC				H		H						H	H						H	H	H					H	Н	H	- 1	
a	Constituted	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	29
b	Operationalisation	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	29
C	Open Access Regulations	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	28
2.0	Unbundling / Corporatisation																														
a	Unbundling/ Corporatisation - Implementation		1	1	1	1	1	1		1	7			1		1			<b>√</b>	1		1	4	1		1	*	1	4	1	19
b	Privatisation of Distribution						1															1									2

Source: Public Finance Corporation of India



## Under-pricing in India, electricity



Source: authours' calculations based on PFC of India data

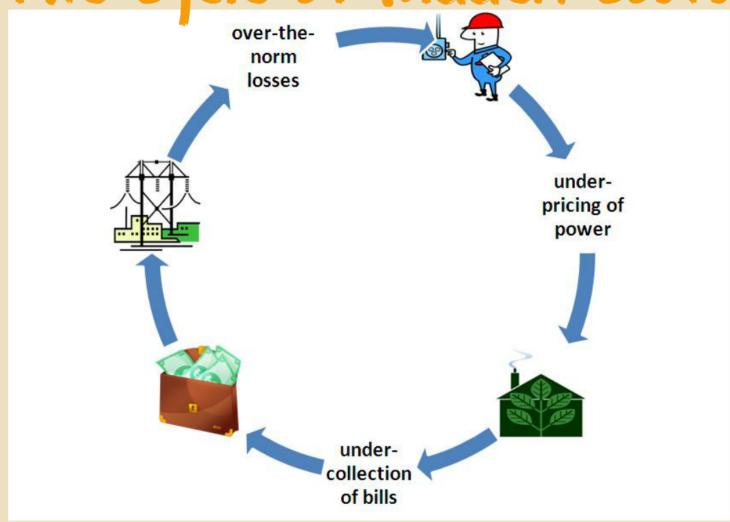


## The Regulatory Challenges of Developing Country

- significant operational inefficiencies (network losses, overstaffing)
- problematic cost recovery (under-pricing, undercollection)
- systematic cross-subsidization (which often does not benefit intended beneficiaries)
- continued public ownership (or unsatisfactory privatization results)

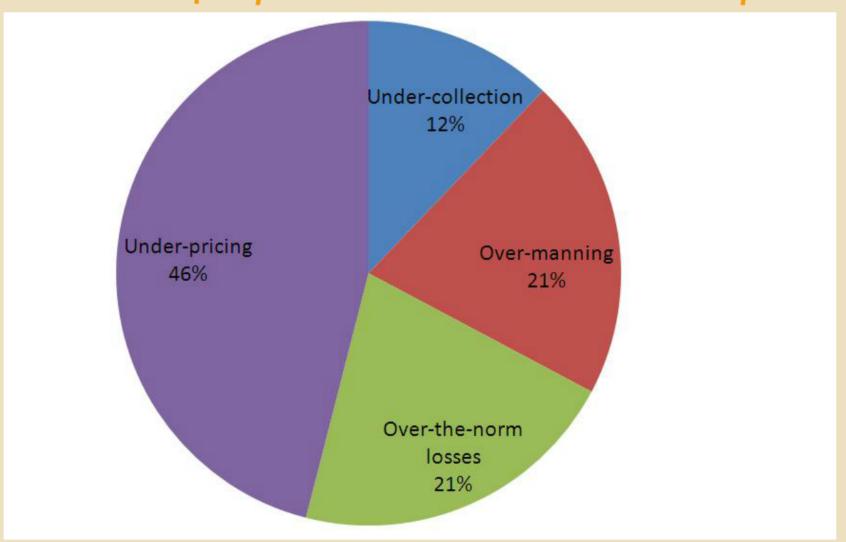


The Cycle of Hidden Costs



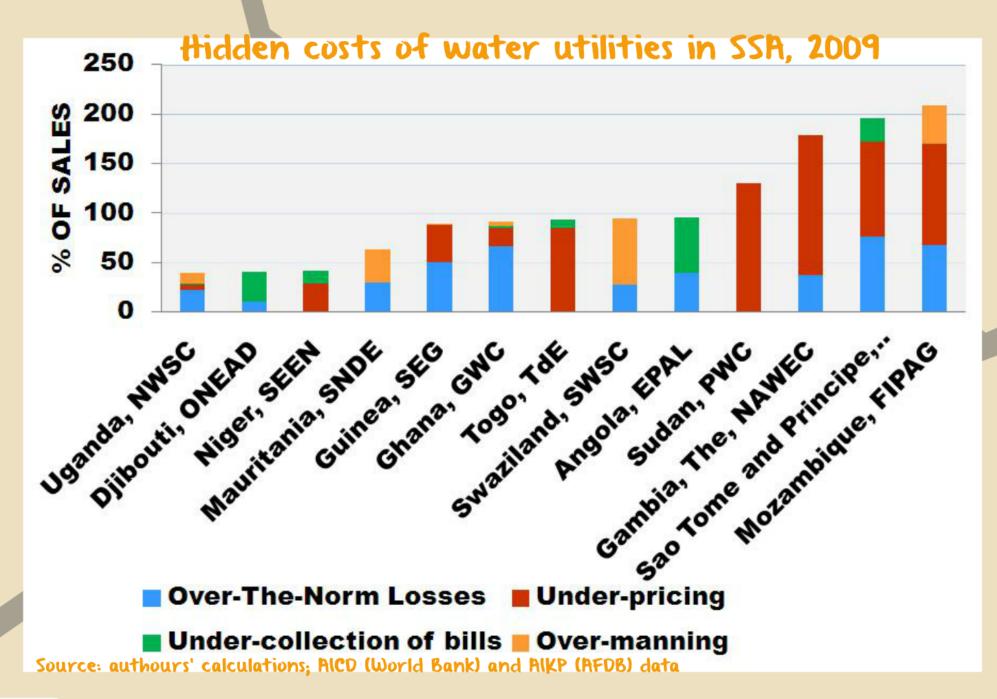


#### ttidden costs, India, electricity 2010: US\$ 14 billion per year or 1% of GDP or 40 % of utility revenues



Source: authours' calculations







# What to conclude?





# The connection between utility performance and private sector participation

Global evidence suggests private sector participation has a strong

positive effect on performance:

number of residential water connections up by 12 % electricity sold per worker up by 32% residential coverage in sanitation services up by 19% bill-collection rate in the electricity sector up by 45% distribution losses in electricity down by 11% hours of daily water service up by 41%

These effects—differences in averages between the pre-PSP and the post-PSP period—occur over five years or more and are over and above the change for similar SOEs.

es Private Sector

But: prices aren't systematically affected by PSP, nor is investment.

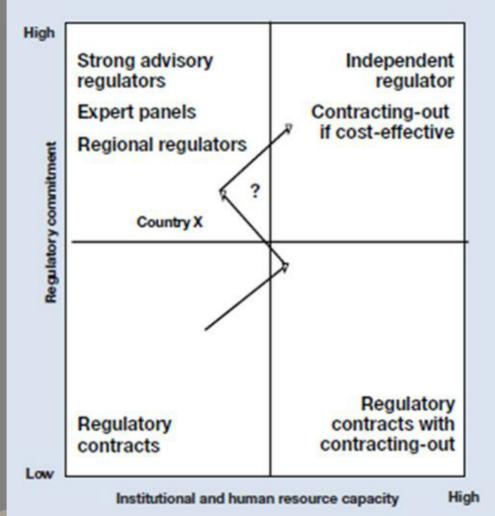


# The Hybrid Regulatory Model

- Compatibility with a country's regulatory commitment and institutional and human resource endowment
- Need to select from a menu of regulatory options to create hybrid models that best fit its own circumstances and challenges (Eberhard, 2007).



### The choice of regulatory option should fit the context



Source: Adapted from Brown and others 2006.

Eberhard, 2007

## Conclusion

In the context of developing countries, the major achievements for regulators are:

- bringing transparency to the price setting process
- developing methodologies to determine appropriate cost levels (including using benchmarking)
- educating government and public to the need for cost-reflective tariffs
- securing the revenues for utilities to undertake needed maintenance, repairs and replacements



# Thank you for your attention!

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