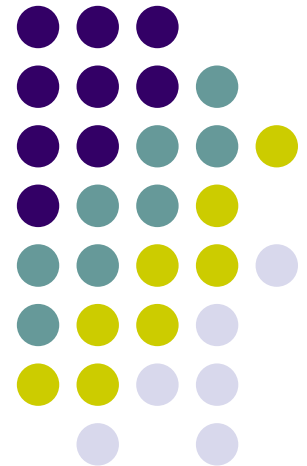


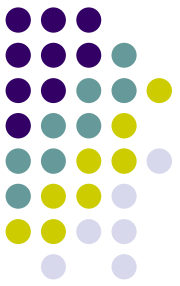
# Regulatory reforms and improved sector performance: A comparative analysis of Indonesia & India

CPR *South* 2007, Manila, January  
19, 2007

Payal Malik & Divakar Goswami

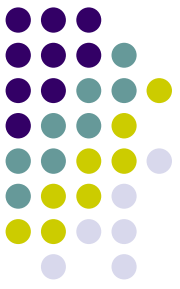


# The Argument



- Conventional wisdom: good policy and effective regulatory structure result in better telecom sector performance (Fink et al. 2001, Cadman & Dineen, Gutierrez & Berg 2000).
- Comparative study of Indonesia and India that explores disjuncture rather than correlation.
- Both countries embarked on reform path of telecom sector in 1999 but ended up with counterintuitive results.
- Despite a more favourable institutional and regulatory climate, India's telecom sector performance scores lower than Indonesia's.
- A number of propositions are explored to explain the heterodoxal outcome.

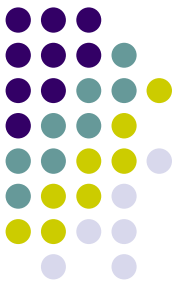
# Descriptive analysis of reform process-India



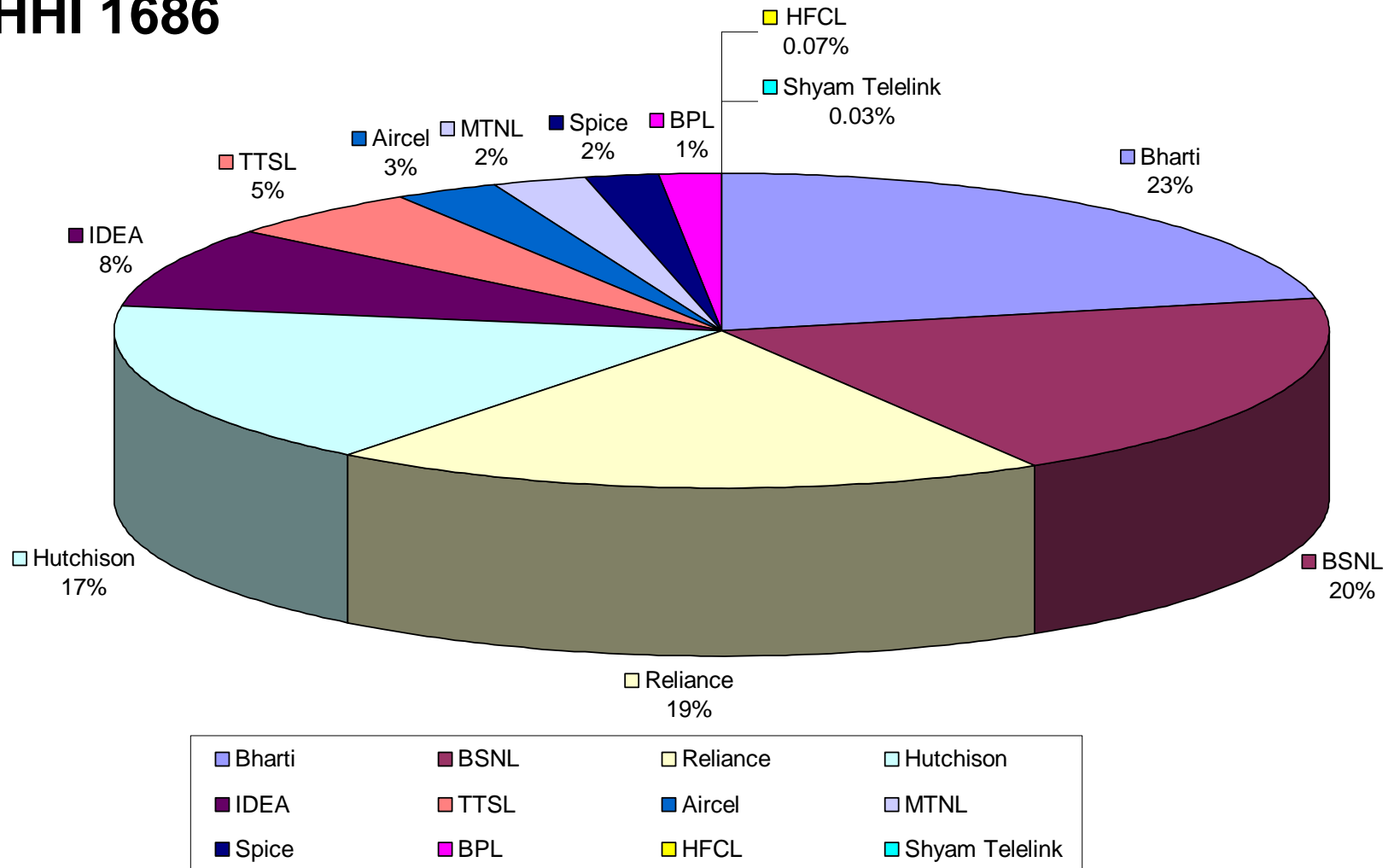
## India:

- Open competitive model
- Separation between policy & regulatory functions.
- TRAI seen to be independent & effective
- Fully privatized one incumbent (VSNL)
- Adopted Unified Access Regime-forward-looking, tech neutral solution to convergence

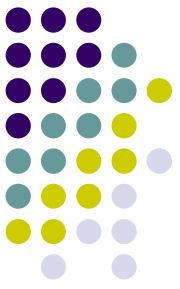
# Indian Mobile Market share



HHI 1686



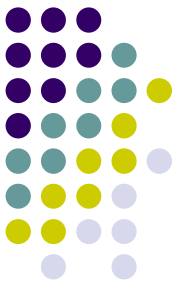
# Descriptive analysis of reform process-Indonesia



## Indonesia:

- Restricted entry, duopoly model (HHI mobile 5082)
- BRTI embedded within ministry, understaffed, under-funded
- Partially privatized both historical incumbents though Govt controlled
- Messy licensing framework that constrains infrastructure rollout & unsuited for converged landscape

# Indonesian mobile market



## Mobile market share by subscriber

**HHI 5082**

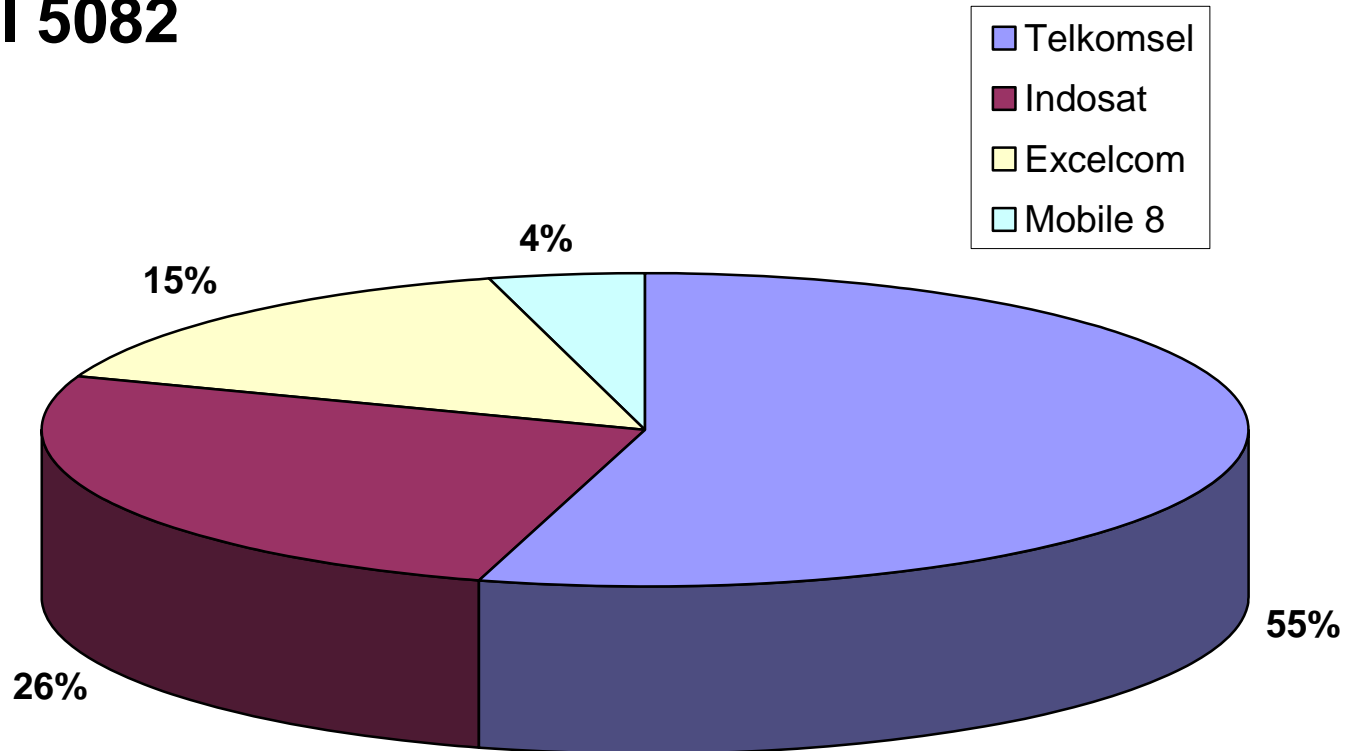
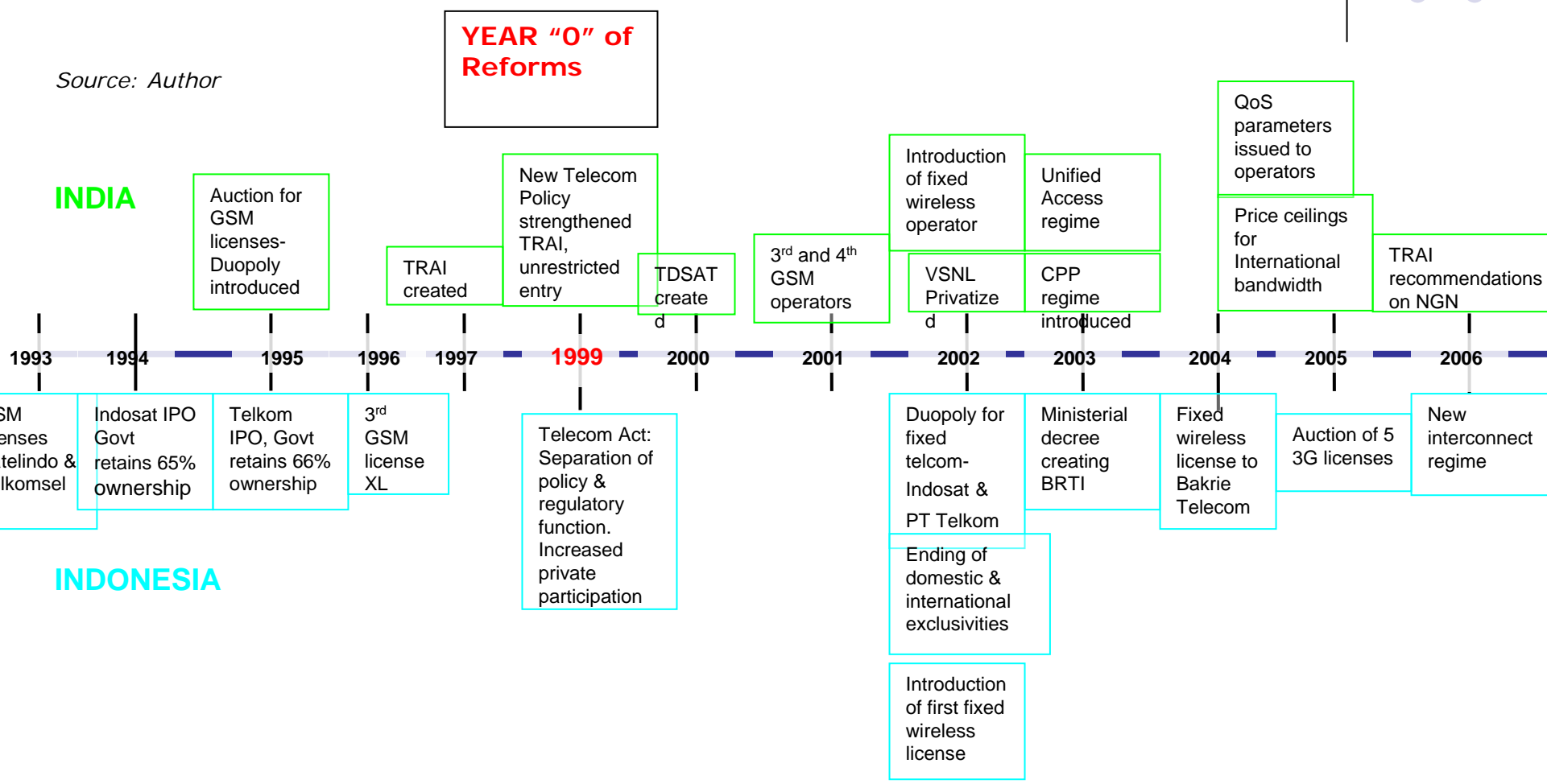


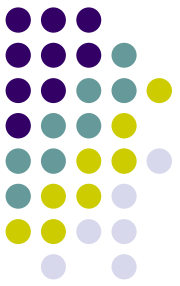


Figure 1: Timeline of Indonesia and India's Reform Process

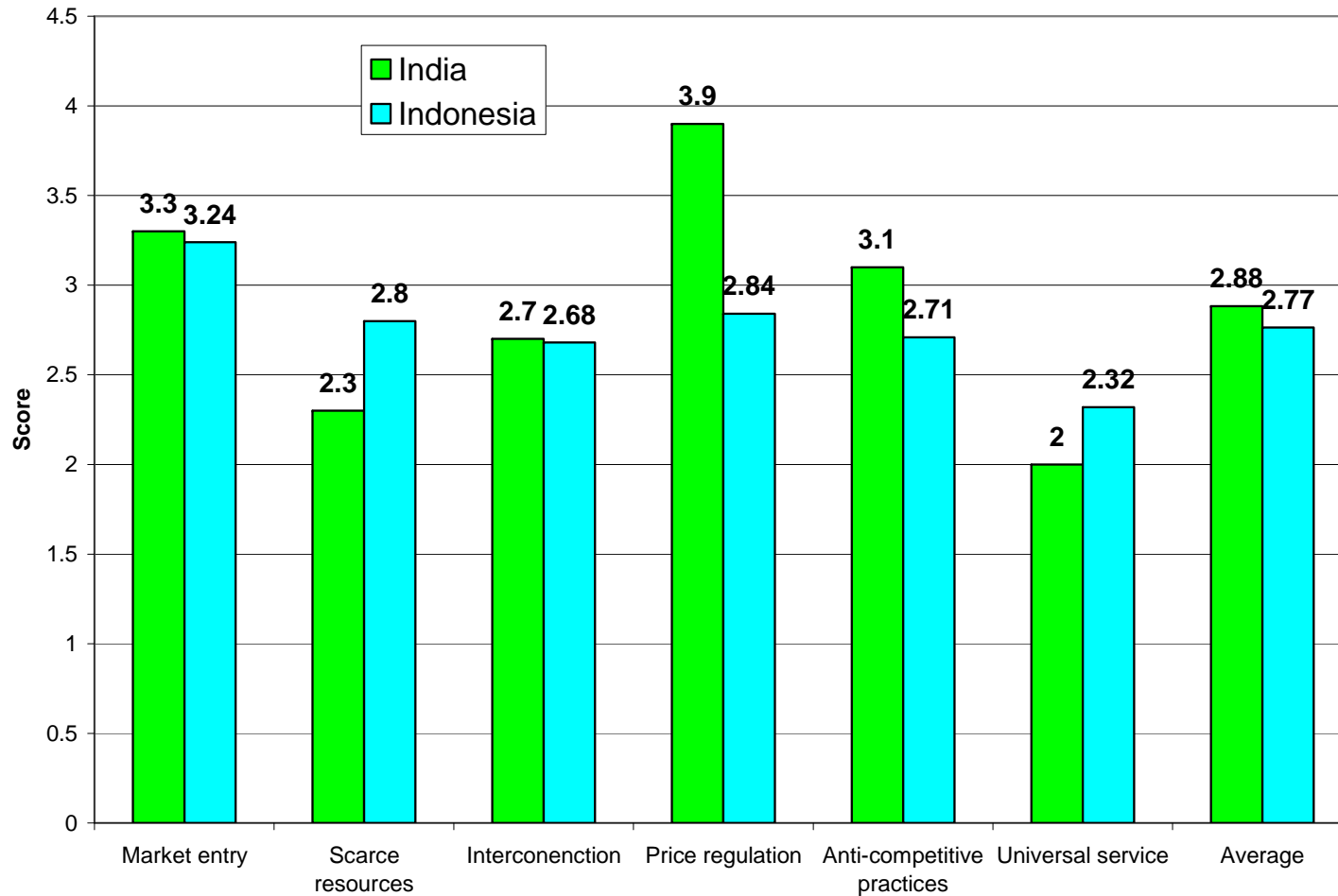
Source: Author



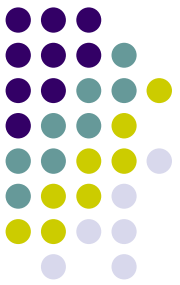
# TRE mobile



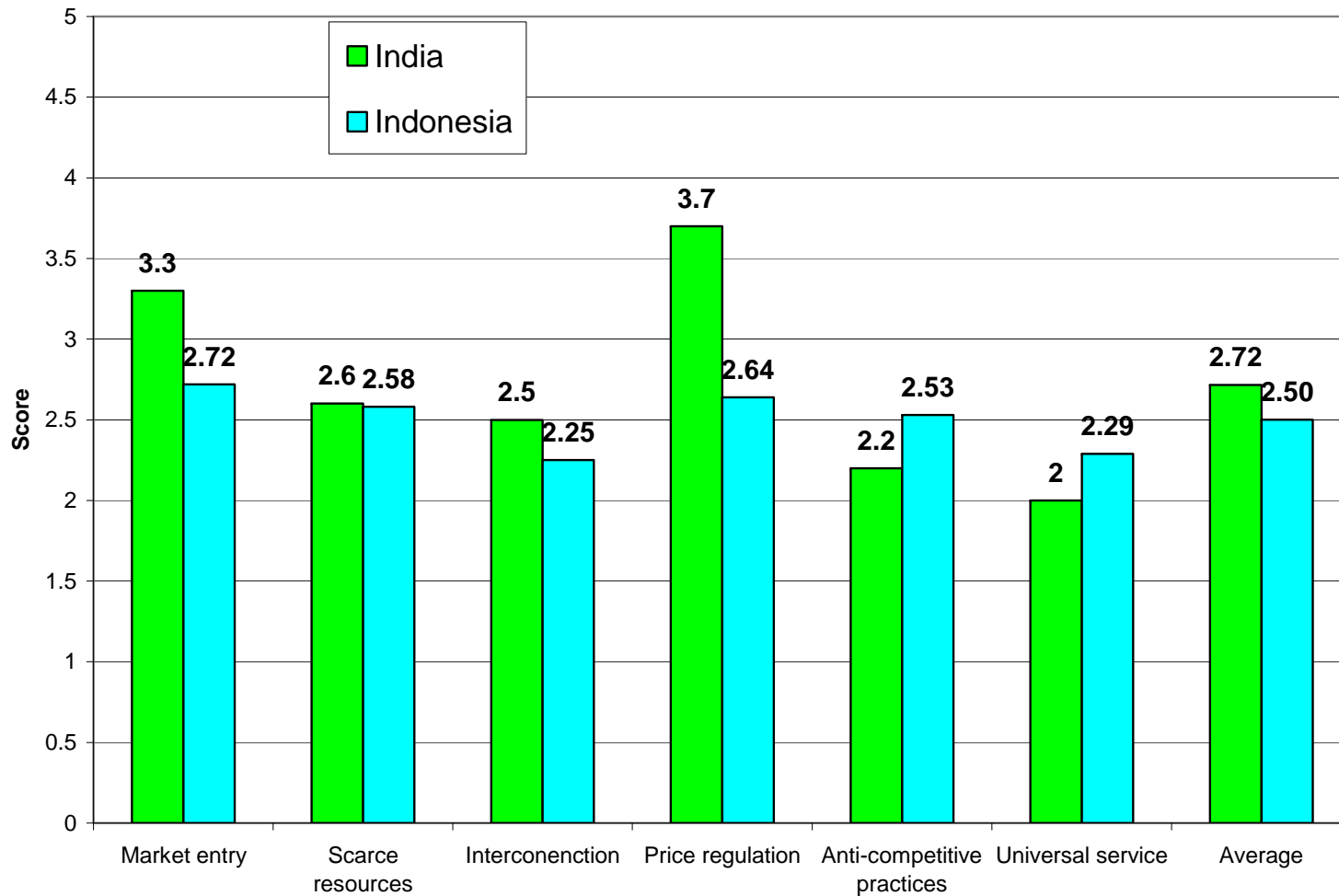
TRE Mobile Comparison: Indonesia and India 2006

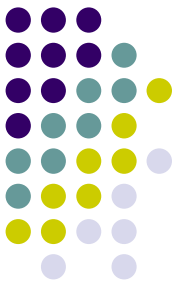


# TRE Fixed



TRE Fixed Comparison: Indonesia and India 2006

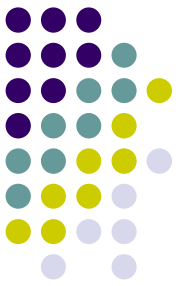




- Based on TRE results & where two countries stand in reform process we should expect Indian telecom sector to post a stronger performance.
- However, India lags Indonesia in mobile, fixed and Internet penetration at the end of 2005:

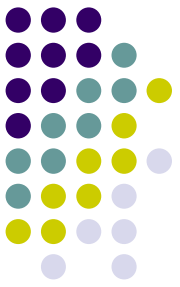
	Fixed per 100	Mobile per 100	Internet per 100
<b>India</b>	4.58	8.22	0.59
<b>Indonesia</b>	5.99	21.6	0.69

# 4 Propositions



1. In 1999, when India and Indonesia embarked on substantive reforms of the telecom sector, India's telecom development was lower than Indonesia's and hence it has been playing catch-up ever since..
2. India's lower average per capita income compared to Indonesia dictated the slower pace in the uptake of telecom services.

## 4 Propositions continued..

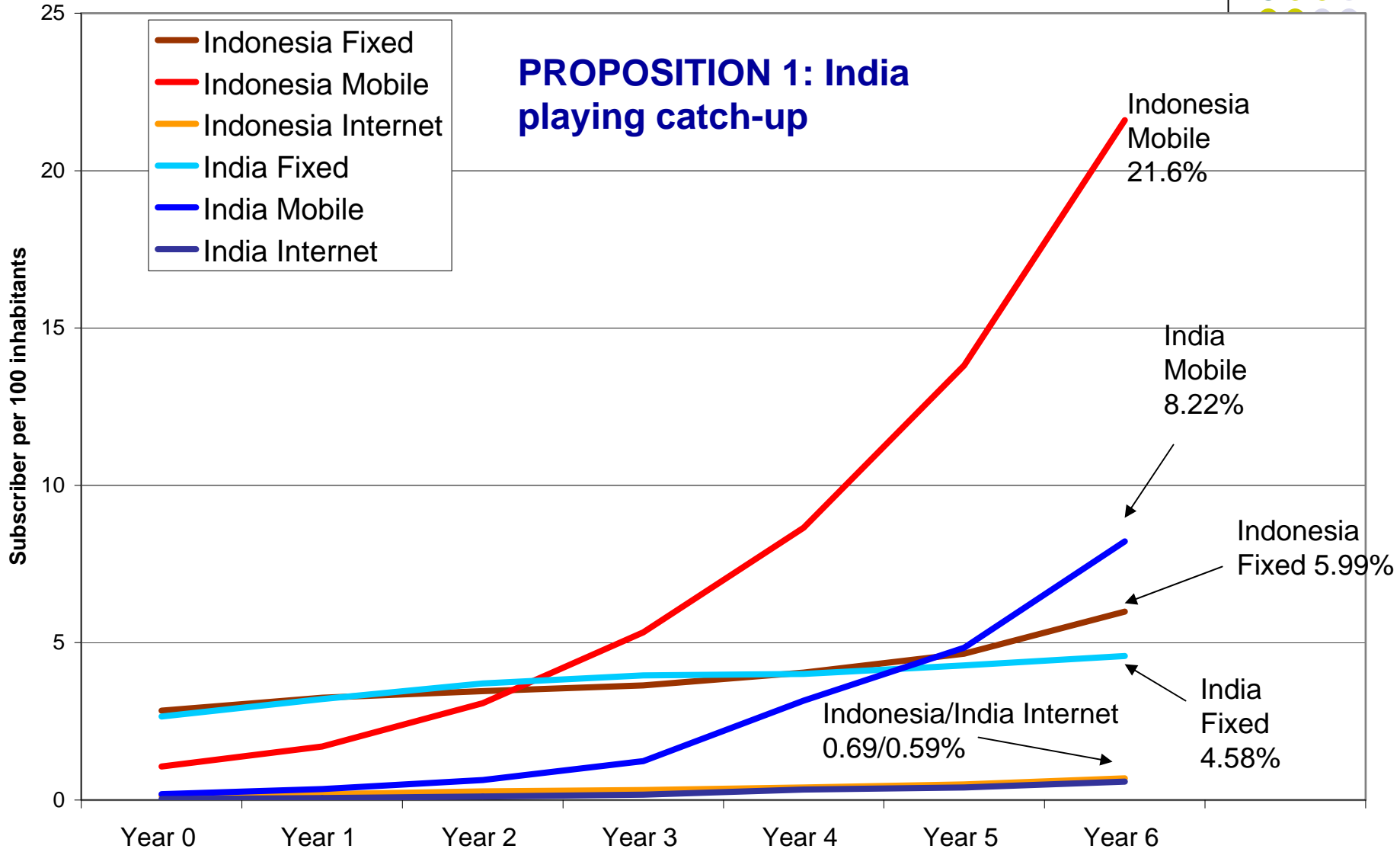


3. Lower prices in Indonesia have made telecom services more affordable and have stimulated demand and hence growth of the telecom sector compared to India.
4. Greater per capita investment in the Indonesian telecom sector compared to India has driven network rollout and penetration in Indonesia.

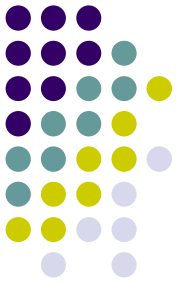
# Comparative ICT Penetration in India and Indonesia Post Reforms



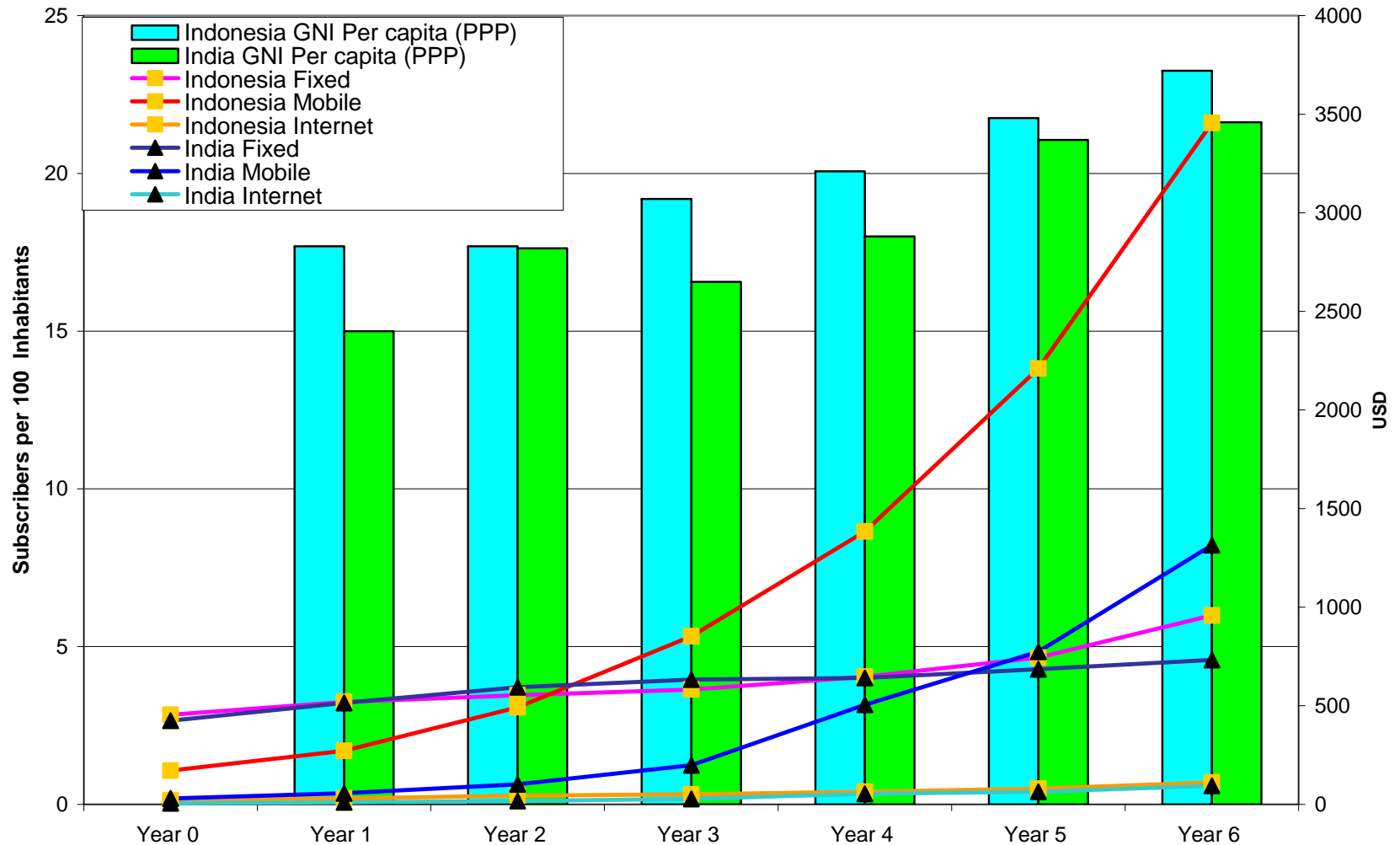
**PROPOSITION 1: India playing catch-up**



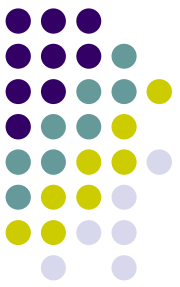
# Proposition 2: India is poorer



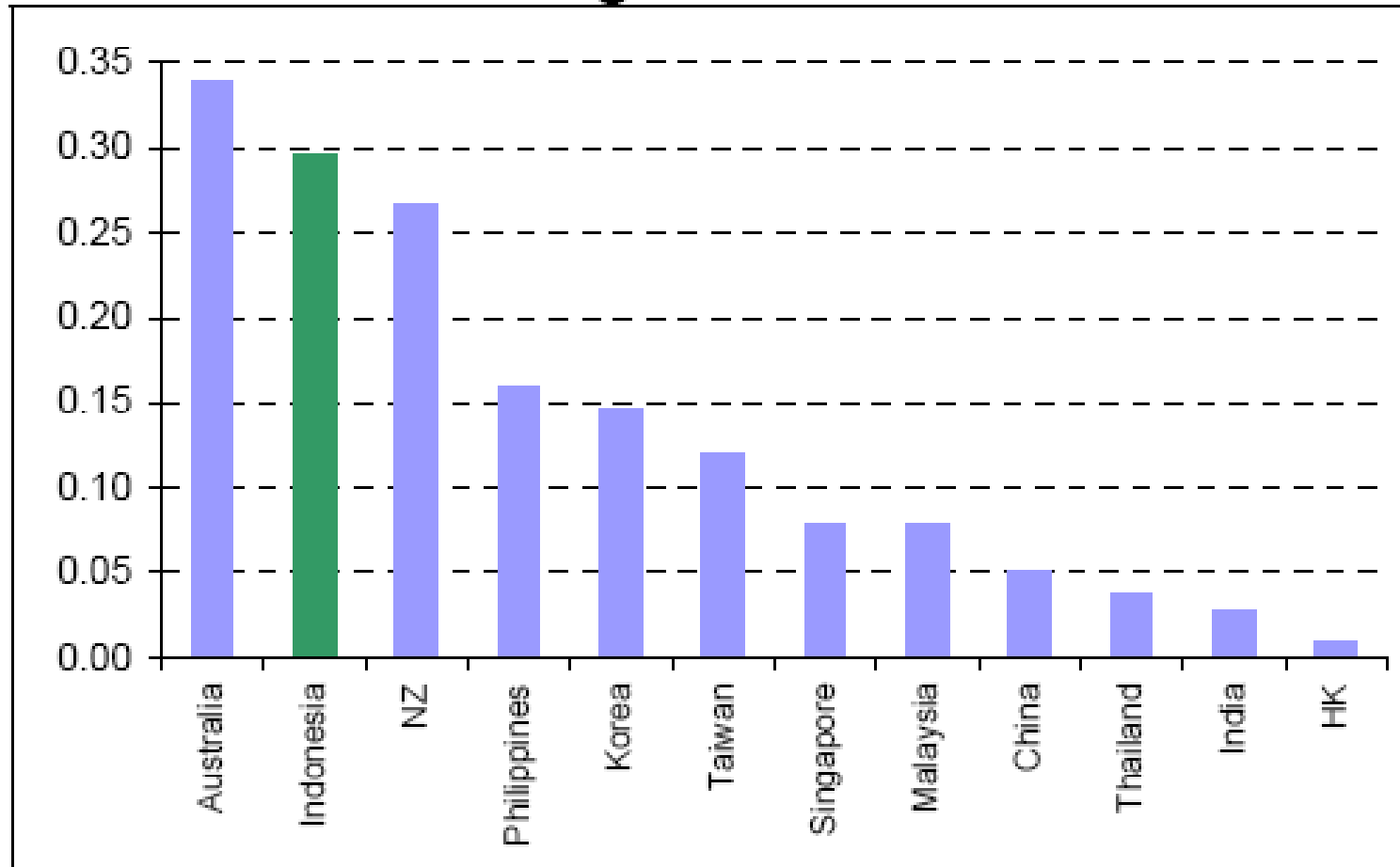
## Comparative GNI Per Capita & Penetration in India and Indonesia



# Proposition 3: Indonesia is cheaper

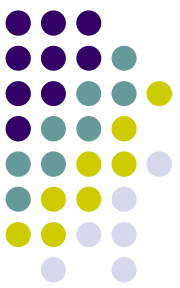


Asian Wireless Telcos: Per Minute Pricing (US\$) in Indonesia Remains High



Source: Company data, Morgan Stanley Research

# Proposition 3: Indonesia is cheaper



**Table 1: Annual Domestic Leased Line Prices**

2Mbps Link	2km	200km
Indonesia	\$18,000	\$45,000
	Ratios India 1: <b>48</b>	India 1: <b>6</b>
India	\$376	\$7,603

Source: [Goswami \(2006\)](#)

Broadband Internet services in Indonesia are about two to three times the price in India as can be seen in Table 2.

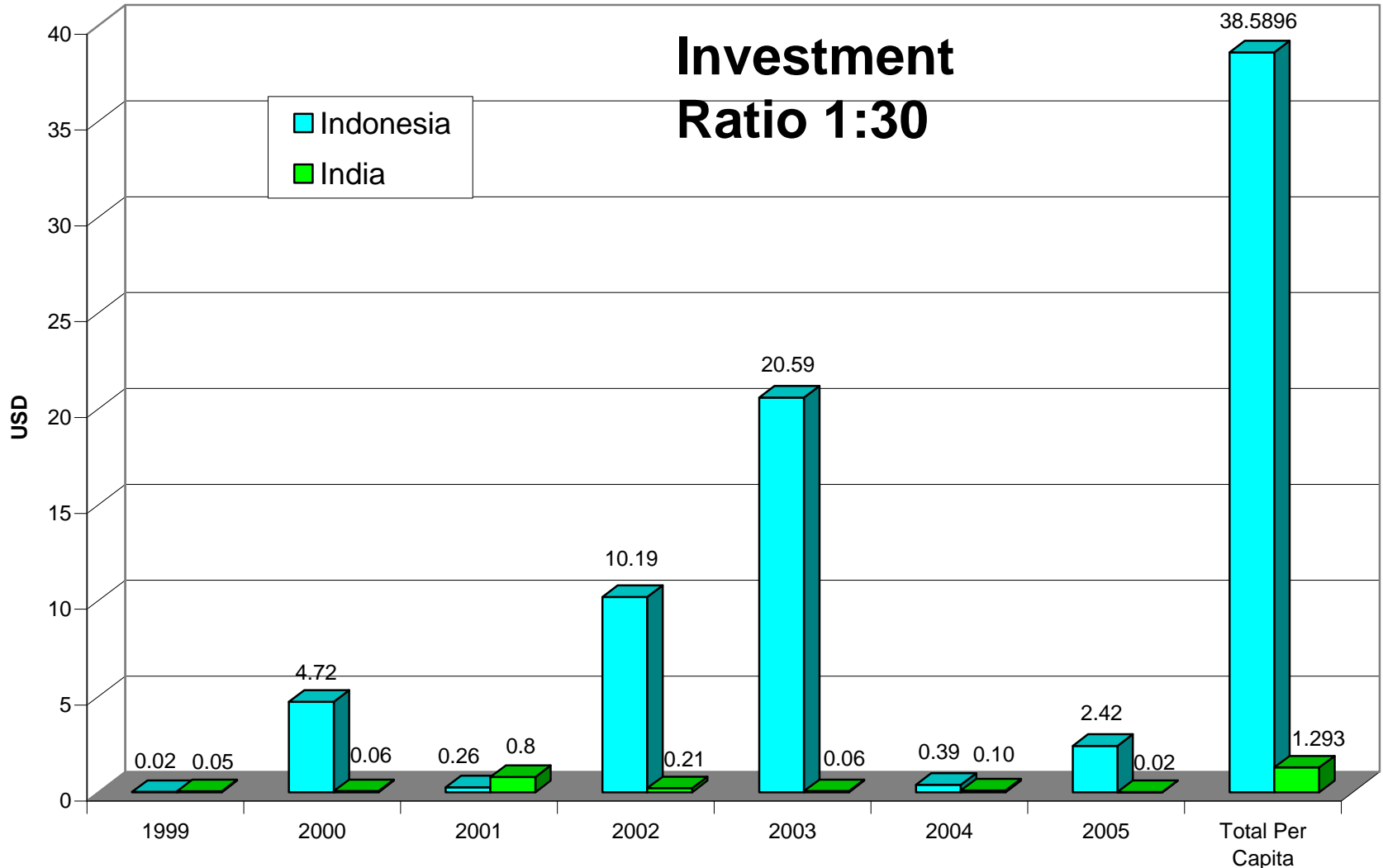
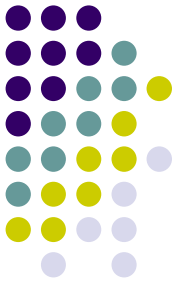
**Table 2: Comparison of monthly ADSL retail prices in Indonesia & India ; Prices (USD) and price ratios**

Bandwidth	Indonesia*	India**	Price Ratio
<b>384 Kbps</b> Usage limit: 1GB* 2GB**	USD74	USD23	<b>3:1</b>
<b>512Kbps</b> Usage limit: 2 GB*	USD93	USD41	<b>2:1</b>

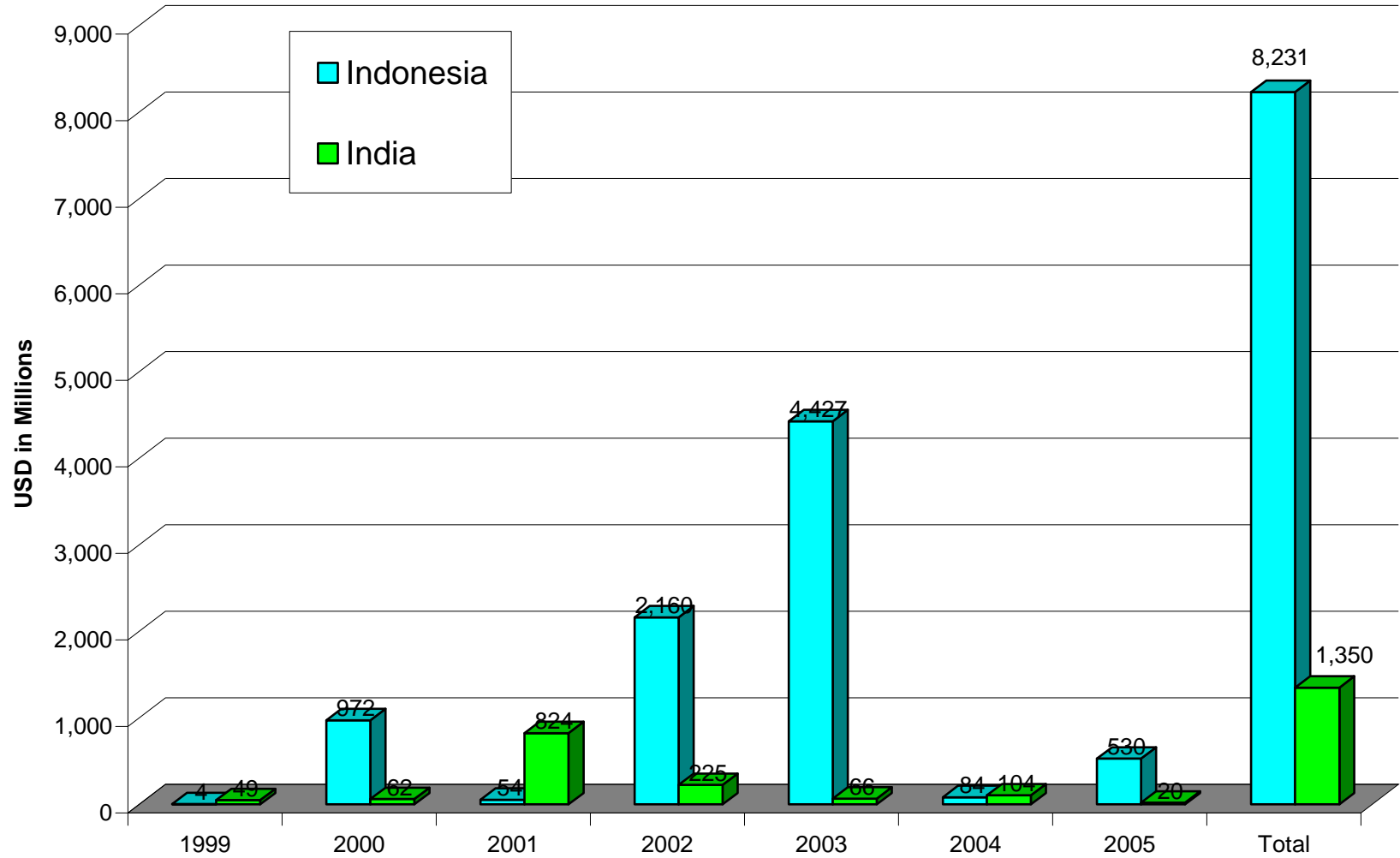
Source: [Goswami \(2006\)](#)

# Proposition 4: Investment drives growth

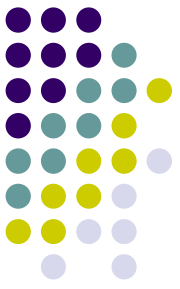
Comparative Per Capita FDI in Telecom Sector: Indonesia & India



# Comparative FDI Flow Post Reforms in the Telecom Sector: Indonesia & India

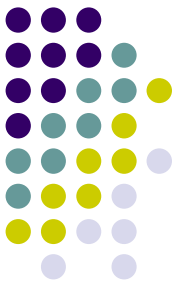


# Indonesia's sector performance explained

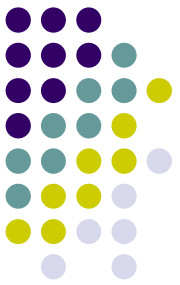


- When the per capita FDI is added up for all seven years, Indonesia has invested USD 37.58 per capita versus USD1.3 for India, a ratio of 1: 30
- The most likely explanation for Indonesia's strong sector performance lies here. Greater investments flowing into the sector has allowed Indonesian mobile operators to deploy BTS and network infrastructure at a more rapid pace and with greater geographical coverage than India's.
- Despite possessing a more favourable regulatory environment, India has not been able to attract as much FDI into its telecom sector as Indonesia has.
- This finding is counter-intuitive because it goes against conventional wisdom and empirical studies that posit a positive correlation between regulatory effectiveness and investment.

# Conclusion



- Study draws attention to the fact that there may be more factors at play in shaping investment climate.
- Investors are usually looking for a stable environment where investments are insulated from arbitrary administrative action, sudden shifts in policy or market conditions.
- By granting exclusivities to the state owned incumbents in their respective markets and by tightly restricting entry, Indonesia was able to guarantee a relatively stable investment environment even though regulatory effectiveness was lacking.



- Levy and Spiller (1994) note:  
*Some countries have regulatory regimes that drastically limit the scope of regulatory flexibility. Although such regulatory regimes may look inefficient, they may in fact fit the institutional endowments of the countries in question, and may provide substantial incentives for investment.*