

# Industry Structure and Industry Impact Indicators

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# Industry Structure Indicators

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- ❑ Fixed (wireline+ FW) market share by No. of subscribers/revenue/minutes of usage
- ❑ Mobile market share by No. of subscribers/revenue/minutes of usage
- ❑ HHI for mobile market, using market share by subscriber/revenue
- ❑ HHI for fixed market, using market share by subscribers/revenue
- ❑ Market share of Pvt. vs. Public operators - mobile
- ❑ Market share of Pvt. vs. Public operators - fixed



# Structure of the Presentation

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## **Attempt to present for each of the indicators**

- ❑ Importance of the Indicator: Why measure?
- ❑ Definitional/Availability issues
- ❑ Limitations of the indicator for policy and regulatory prescriptions
- ❑ How to compare: Normalization Issues
- ❑ Recommendations for Improving the Quality of Indicators



# Market Share: Fixed

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## Why Measure?

- ❑ A measure of the Level of Competition
- ❑ Implications for Internet and Broadband diffusion and in some countries for Universal Service
- ❑ Can guide policy and regulation: LLU recommendations
- ❑ Market power derived from the legacy telecommunications can be transferred to the emerging broadband market
- ❑ Level of Public/Private Participation



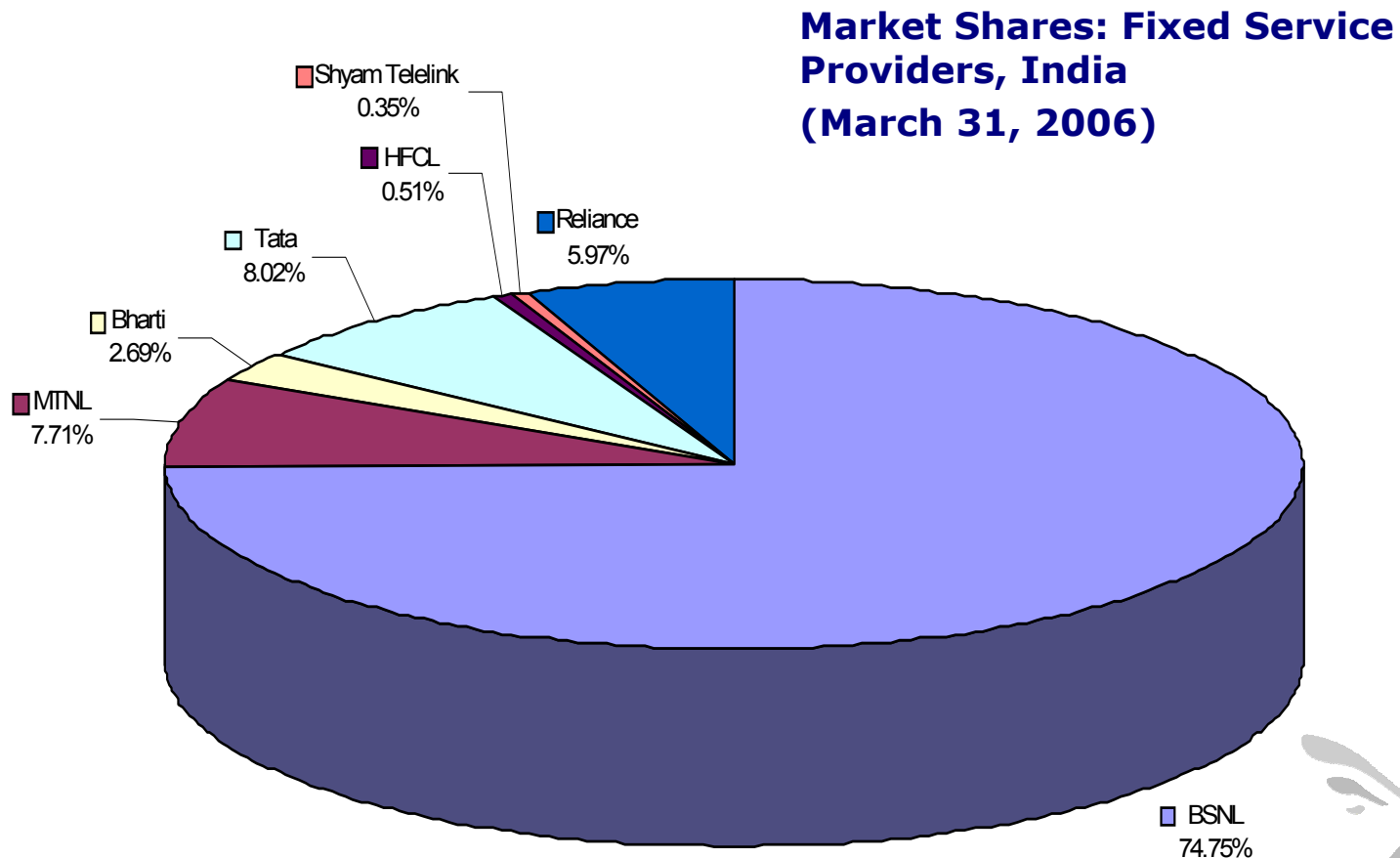
# Measuring Issues

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- ❑ WLL-F, is it fixed or mobile?
- ❑ Other than India and Pakistan (NRAs report) market shares are calculated by the researcher using company data (subscriber-based)
- ❑ Market Share based on Revenue and Minutes of Usage not available for any of the 6 countries
- ❑ Perhaps better to measure for rural urban separately or try and show the regional differences: Thailand



# What do they say? India



Source: TRAI, Performance Indicators



# Market Share: Mobile

## Why Measure?

- ❑ A Measure of the Level of Competition
- ❑ Feeds into the HHI measure: Merger and Acquisitions and application of antitrust law
- ❑ Relevant product market
  - “voice” vs. “data” market , degree of substitution, ease to switch
- ❑ Relevant Geographic Market
  - Zone/circles
- ❑ Efficiency concerns may override anti-competitive concerns
  - Failing firms may be exceptions

## How should it be measured?

- ❑ Subscriber base vs. Revenue Base vs. Minutes of Usage



# Mobile Industry Structure

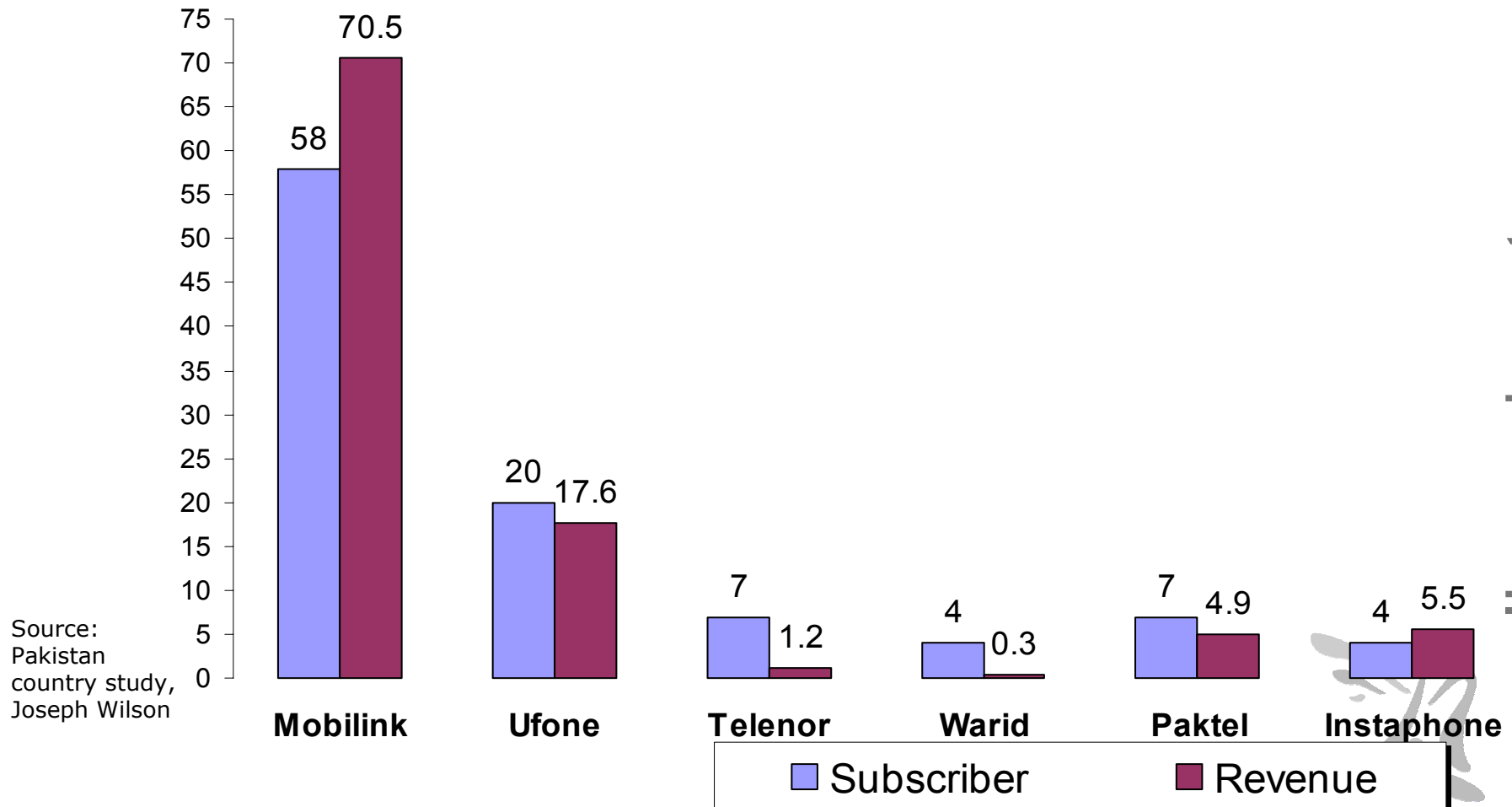
## Indicators: Status

Indicator	IN	ID	PAK	PH	SL	TH
Mobile market share by # of subscribers	TRAI	Calculated by researcher using company data	PTA	Calculated by researcher using company data	Calculated by researcher using company data	Calculated by researcher using company data
Mobile market share by revenue	CMIE	Calculated by researcher using company data	PTA			
Mobile market share by minutes of usage						
HHI for mobile market, using mkt share by subscriber/revenue	TRAI, CMIE	Not by revenue		Not by revenue	Not by revenue	Not by revenue
HHI for fixed market, using mkt share by subscribers/revenue	TRAI, CMIE			Not by revenue	Not by revenue	Not by revenue



# Market Share: Subscriber base Vs. Revenue Base, Illustration Pakistan

Market Share (2004-05)



# THE HERFINDAHL-HIRSCHMAN INDEX: Mobile and Fixed

- ❑ A widely accepted tool for measuring market concentration
- ❑ HHI takes into account the relative size and distribution of the all the firms (rather than top 4 or 5 firms) in a market and approaches zero when a market consists of a large number of firms of relatively equal size
- ❑ DoJ: Markets in which the HHI is between 1000 and 1800 points are considered to be moderately concentrated, and those in which the HHI is in excess of 1800 points are considered to be concentrated.
- ❑ Transactions that increase the HHI by more than 100 points in concentrated markets presumptively raise antitrust concerns under the Horizontal Merger Guidelines issued by the U.S. Department of Justice and the Federal Trade Commission
- ❑ In India mergers and acquisitions are tested on basis of SMP and concentration ratios as per TRAI guidelines



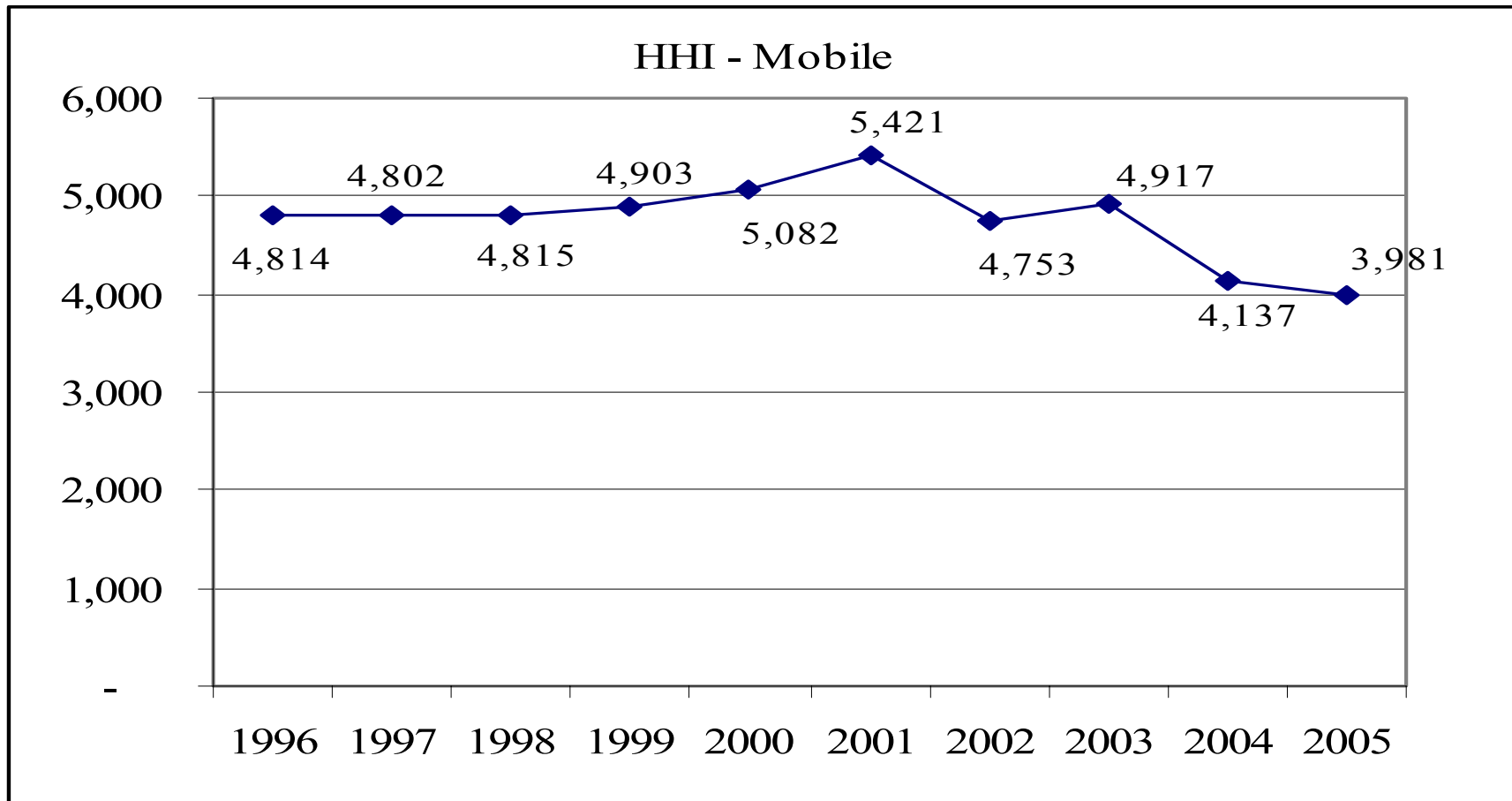
# Measurement Issues: HHIs

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- ❑ Comparability: Many countries divide it by 10, 000
- ❑ HHI: Regional vs. National
- ❑ Revenue based HHI should also be reported: TRAI now publishes revenue data company wise
- ❑ NRAs should make it a yearly practice at least of reporting HHIs

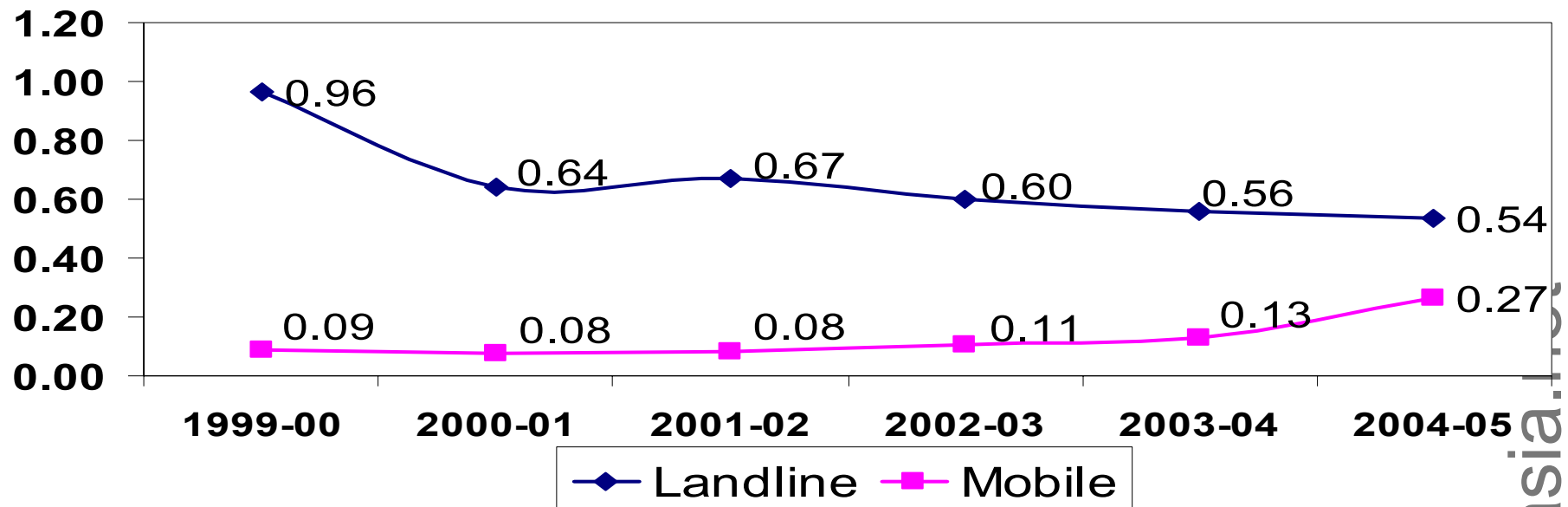


# Best Practice HHI: Thailand



# HHI Revenue base and Subscriber base Illustration: India

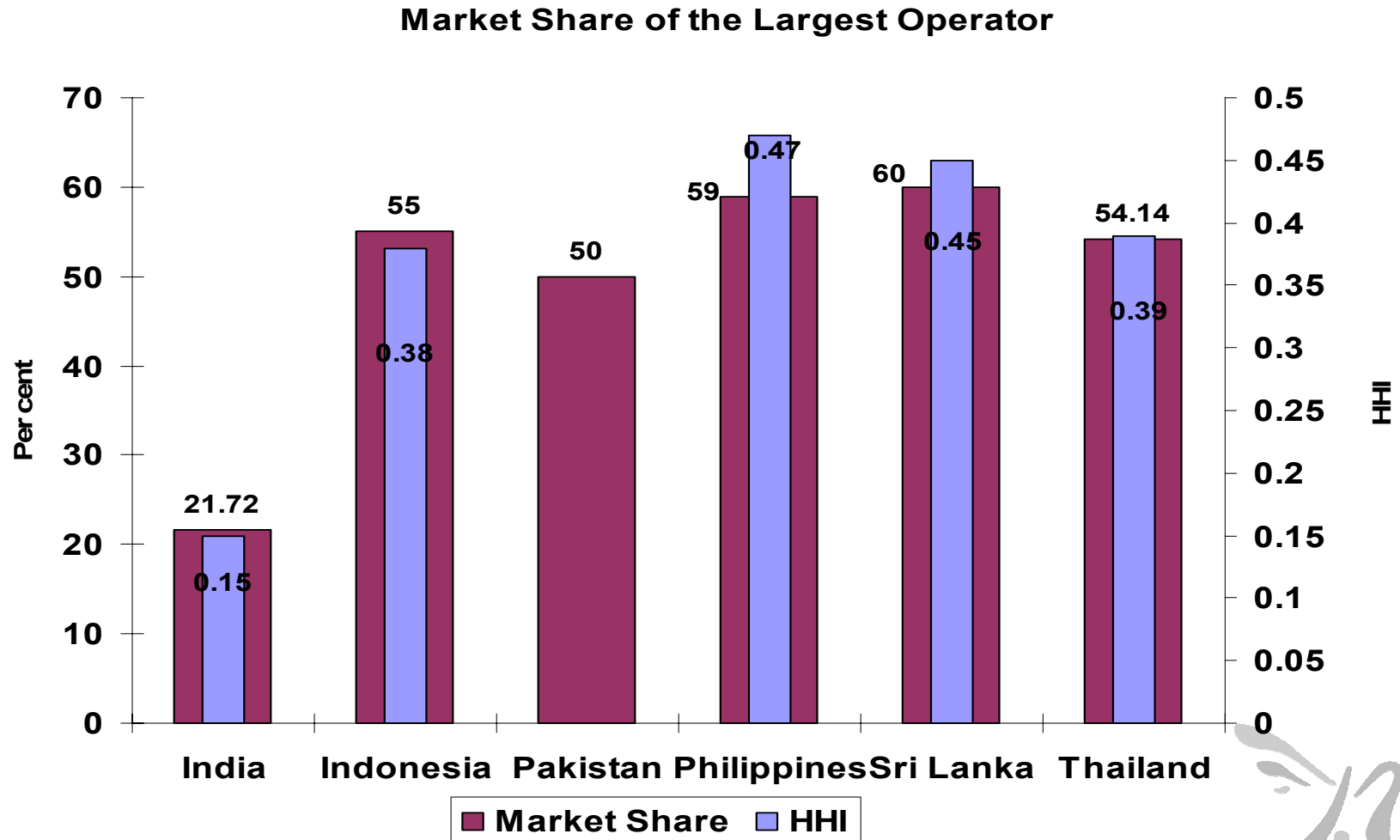
HHI: Revenue Based



Subscriber Base HHI

Fiscal Year	2004-05	2005-06
HHI Fixed Service	0.67	0.58
HHI in Mobile Service	0.16	0.15

# Market Structure Indicators: Comparative Picture



# Industry Impact Indicators: Status

Indicator	IN	ID	PK	PH	SL	TH
Total Investment	TRAI, Definition provided		PTA (no definition)		TRC (no definition)	Definition provided
Total Foreign Investment	DoT, Government, DIPP	BKPM (Investment Board); no definition	PTA (no definition)	Total Approved FDI, Board of invtt., PEZA, SBMA, CDC	No definition	
Total Tax paid by sector	TRAI, Service tax, GST, Spectrum charges, license fee, USO charges		PTA (activation tax, GST, CED, Income Tax, Custom duties, PTA deposits etc.)	6% of total tax receipt PLDT Group to NTC re SMP, 22 Oct 06 (no definition)		Companies Data Different for fixed and mobile
Total Employment in Sector	TRAI, NSO data not just for telecom, formal and informal employment		PTA, service wise, direct and indirect employment	PLDT Group to NTC re SMP, 22 Oct 06 (no definition)	No definition	

# Investment

## TRAI, India

- Gross Capital investment of Telecom Services Sector
- Capital Employed and Return on Capital Employed (RoCE)
- Definition: The Capital Employed is fund deployed to operate the business. It is sum of depreciated value of capital assets /fixed assets, capital work in progress and working capital
- Spells out the definition in the Accounting Separation Regulation

## Thailand:

- Definition: Investment refers to the annual expenditure associated with acquiring ownership of property and plant used for telecommunication services and includes land and buildings

## How to compare?

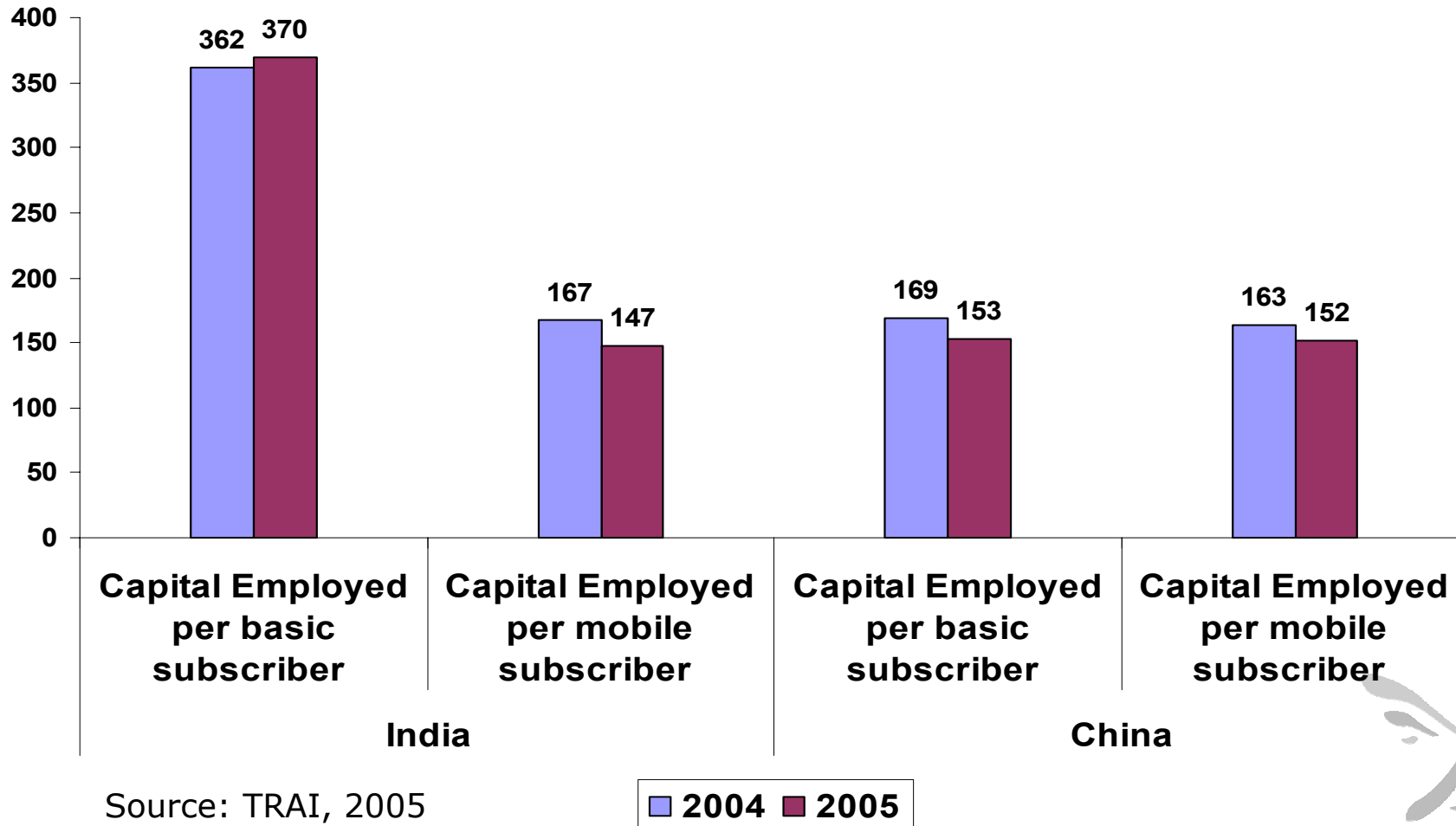
- Capital employed per subscriber (mobile and basic)
- Capital Employed Per Capita
- Incremental Capex per incremental subscriber: Ideal





# How to compare Capital Employed? Illustration, India

Capital Employed per mobile and basic subscriber



Source: TRAI, 2005

# Foreign Investment: What is it?

## FDI Definition, India:

- ❑ Investments by FIIs, NRIs, FCCBs, ADRs, GDRs, convertible preference shares, proportionate foreign investment in Indian promoters/investment companies including their holding companies
- ❑ Earlier this was capped at 49% now 74%, whereas Pakistan 100% FDI allowed: so policy matters in determining the indicator

## Thailand

- ❑ Telecommunications Act, limits foreign equity holdings to 49%
- ❑ Foreign investors acquire complete corporate control, despite the direct equity share limitations: through indirect equity holding i.e., holding of equity shares in a series of holding companies up the company's ownership chain or through Thai nominees



# Tax Paid by the Sector

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## What should be included in Tax?

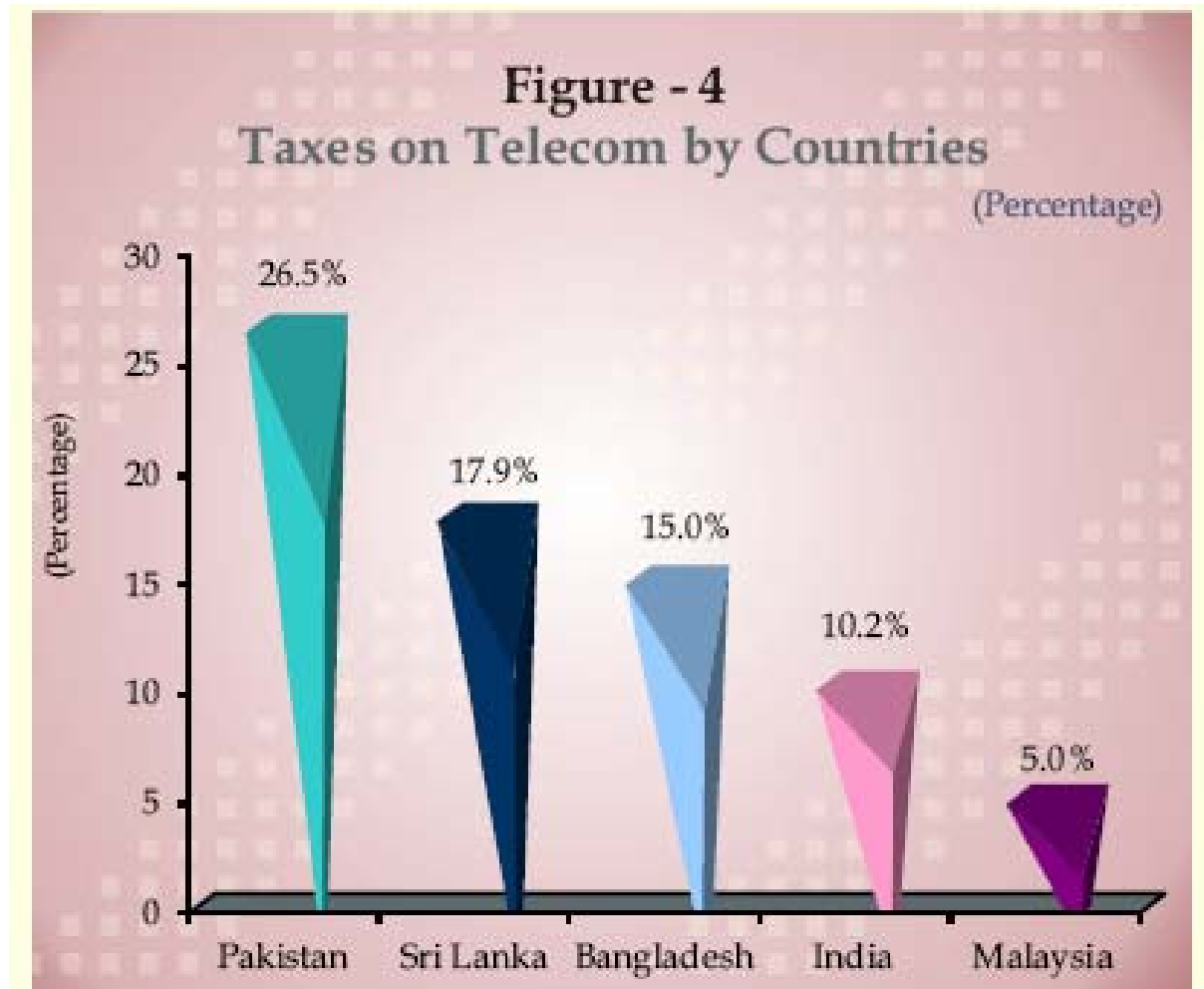
- ❑ Any levy is passed on to the subscriber by the service provider: So tax is a very narrow measure
- ❑ All that should be captured: TRAI publishes data on such levies in a detailed manner e.g. Service Tax, GST, Licence fee, Spectrum Charges, USO levy

## How to compare?

- ❑ Absolute Number does not help
- ❑ Total levy on telecom service as a percentage of total revenue
- ❑ Tax as a percentage of total telecom revenue



# How to compare Tax paid by the sector? Illustration Pakistan



# How to compare Tax paid by the sector? Illustration India

	Pakistan	Sri Lanka	China	India
<u>Regulatory charges</u>	<u>%age of revenue</u>	<u>%age</u>	<u>%age of revenue</u>	<u>%age of revenue</u>
Service Tax, GST	GST	VAT	3%	8%+ GST
License Fee	0.5% + 0.5% R&D	0.3% turnover (t.o.) + 1% of capital invested (inv)	Nil	5~10%
Spectrum Charge	Cost recovery	~ 1.1% of t.o.	~ 0.5%** (China Mobile)	2~6%*
USO	1.5%	Nil (only on ISD calls)	Nil	Incl in license fees
<u>Total Regulatory charges</u>	2.5% +GST+ cost recovery	=1.3% t.o.+1% inv+ VAT	~ 0.5 % + 3% (Tax)	15% ~ 24% + GST

Source: TRAI, 2005



# Total Employment in Sector

- Formal and informal employment: PTA
- TRAI reports using companies data

## Methodology NSO India

(Communication services other than those of couriers and cable operators)

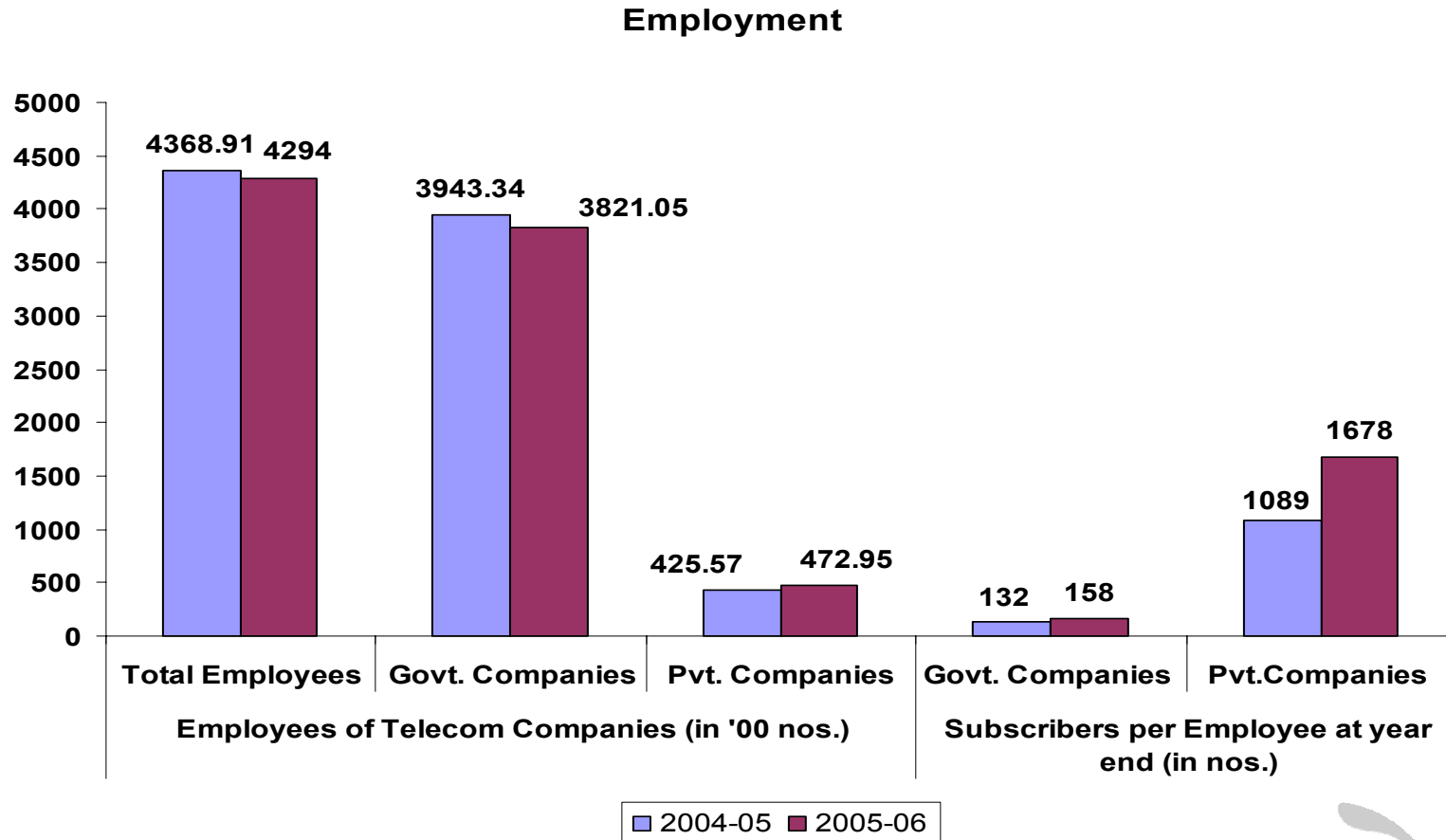
- workforce in the activity, separately for rural/Urban/organized/un-organised segments: ASI and economic census (once every 5 years)
- the private organized sector estimates have been prepared using the data on estimated workforce (from the DGET source)
- economic activities of internet, cyber cafés, etc. have also been included

## How to compare?

- Employee per subscriber



# How to compare employment figures? : India



Source: TRAI, 2005



# Recommendations

- ❑ Revenue based and minutes of usage market shares important as may reflect different market power scenarios
- ❑ A central agency should collect the data periodically from the operators and make it available to the general public through its website.
  - e.g. Data for Pakistan and India mostly from NRAs.
  - Philippines source of the data however was not government: a position paper of the number 1 telco vs the issuance of an SMP ruling
- ❑ Standardize definitions for investment, tax and employment for meaningful comparisons
- ❑ List of indicators from these parent indicators for comparability: Suggested a few





# Recommendations: India

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## NSO

- ❑ NSOs can facilitate employment data rather than just operator's employment data
- ❑ India NSO has not adopted any ICT definition; span across various NIC codes; suggest adoption for measuring ICT output, employment and other macro indicators

## TRAI

- ❑ Definitions of the data should be published
- ❑ Time-Series data on the financials
- ❑ More disaggregated data from the operators should be made public



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# Thank You



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