

TRAI experience with Gathering and Publishing Indicators

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Content

- **Growth oriented data**
- **Economic Performance indicators**
- **Financial data or Accounting**
- **Separation data**
- **QOS Indicators**
- **Future trends**

Services covered

- **Fixed Service**
- **Mobile Service**
- **Internet Service**
- **PMRTS (Public Mobile Radio Trunking Service)**
- **VSAT**
- **Cable TV, DTH & Radio**
- **Broadcasting Services**

Growth oriented data

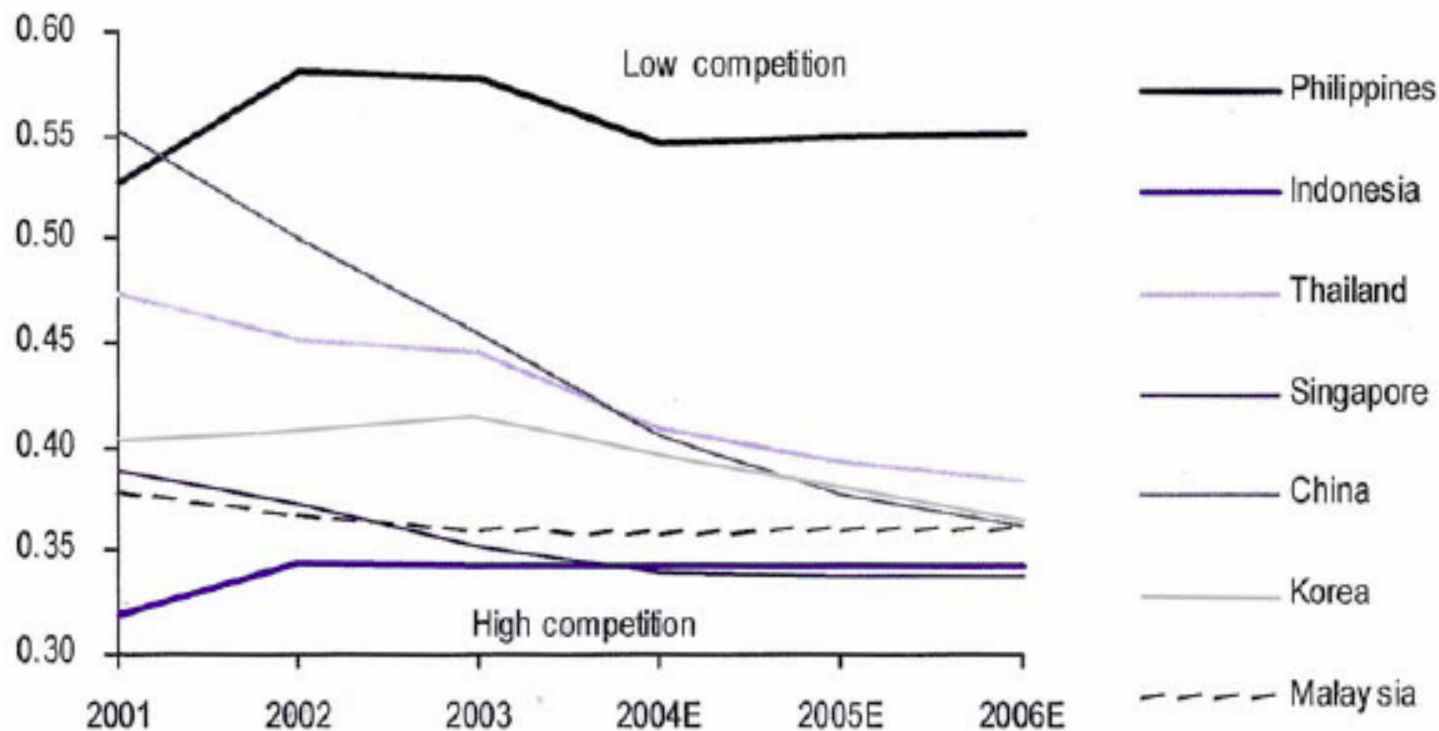
- **Growth trend of different services**
- **Growth in different categories of service areas**
- **Growth trend of different technologies**
- **Level of competition**
 - **Market share of various service providers**

Level of competition

- Herfindahl-Hirschman Index (HHI)
 - Sum of square of the market share of all the operators in the market
 - 1 = monopoly and 0 = pure competition

HHI in some Asian markets

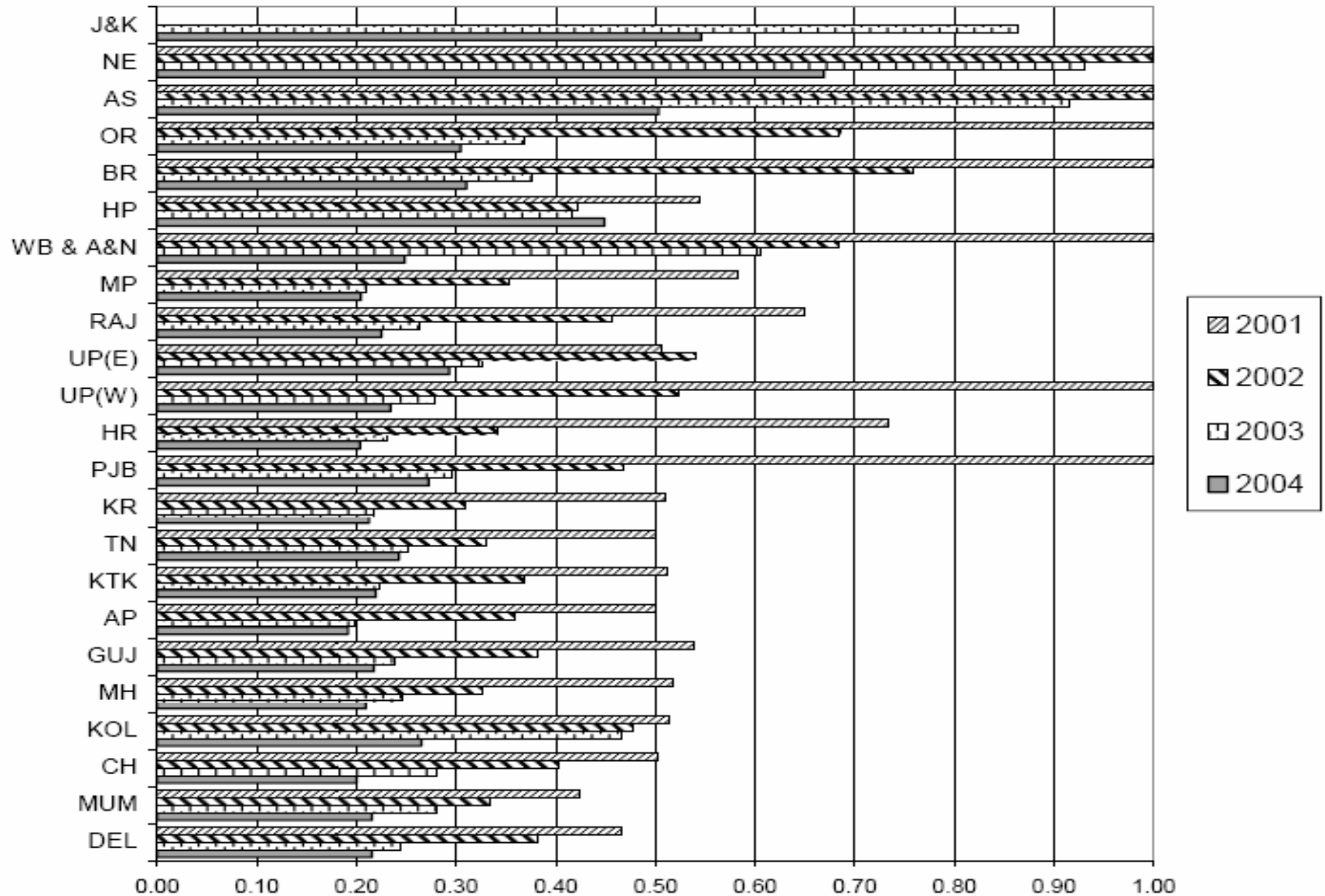
Asian Telecom TrendWatch 20 December 2004



Source: UBS estimates

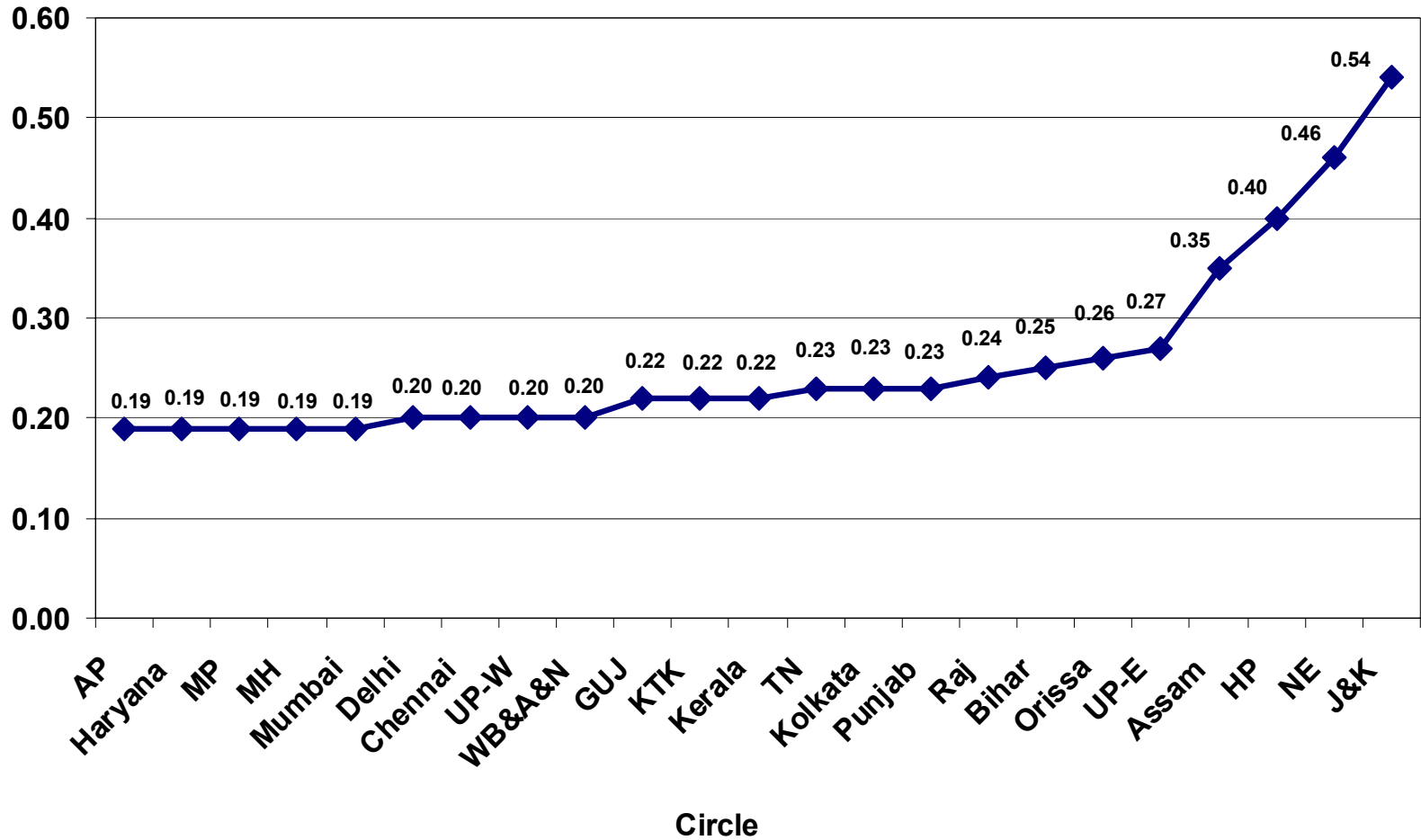
HHI Circle Wise

Circle-Wise HHI for Mobile Services



HHI Circle wise

HHI for mobile services as on Dec. 2005



Level of competition

- Concentration ratio in a network industry market
 - Sum of market shares of the 3 largest enterprises
- Market share of incumbent in a network industry
- Percentage of consumers with a choice of two or more suppliers or operators
- Number of operators with Significant Market Power
 - Definition of SMP

Levies and Taxes on sector

	Pakistan	Sri Lanka	China	India
Regulatory charges	%age of revenue	%age	%age of revenue	%age of revenue
Service Tax, GST	GST	VAT	3%	10%+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 turn over (t.o)	~ 0.5% (China Mobile)	2~6%
USO	1.5%	Nil (only on ISD calls)	Nil	Incl in license fees
Total Regulatory charges	2.5% + GST + cost recovery	1.4% t.o. + 1% inv + VAT	0.5 % + 3% (Tax)	17% ~ 26% + GST*

** In addition, the operators are paying ADC on per minute basis which could be around 5% of AGR.*

Indian Telecom Service Sector is paying almost 1/3rd of AGR in form of various levies which is very high compared to international standards. 11

Service Tax Collections since 2001

(Fig. in Crores)

Service Tax Collections	Telephone	Insurance	Brokerage	Others	Total Service Tax	Growth	Growth (%)
2001-02	1,712	442	273	1,173	3,600	1,060	42
2002-03	2,129	677	293	1,901	5,000	1,400	39
2003-04	3,024	1,044	378	3,854	8,300	3,300	66
2004-05	4,470	1,399	679	7,602	14,150	5,850	70
2005-06B	5,186	1,623	788	9,903	17,500	3,350	24

B- Budget Target

Source:- The Economic Times dated 4th March 2005

Government gains through reduced fees

Statement of estimated revenue to be received by Central Government - Mobiles								
All circle and Metro License				(Rs.in Crore)				
		1	2	3	4	5	6	7
	YEAR	Licence fee under old regime	Licence fee under new regime (post NTP 99)	License Fee as per 2001 Regime	License Fee as per 2003 Regime	Service tax(Estim ated)	Spectrum Charge	License Fee+ Service Tax+ Spectrum Fee
1	1999-00	1603	275	209		92	37	338
2	2000-01	2270	619	468		206	82	757
3	2001-02	2734	793	602		264	105	972
4	2002-03	2455	872	657		368	115	1141
5	2003-04	2470	1727	1296		745	341	2382
6	2004-05	2511	2698		1478	1480	540	3498
7	2005-06	2591	4586		2678	2340	1094	6112
8	2006-07	2680	7796		4302	4741	1850	10893
		19314	19366	3234	8458	10236	4165	26093

- Rate of Service Tax - 5% up to 13.5.2003, 8% up to 31st March 2004 and thereafter 10%
- **Service tax for cellular service is taken proportionately on the basis of revenue.**
- **Telecom sector contributed almost 50% of the total service tax collected by the government**

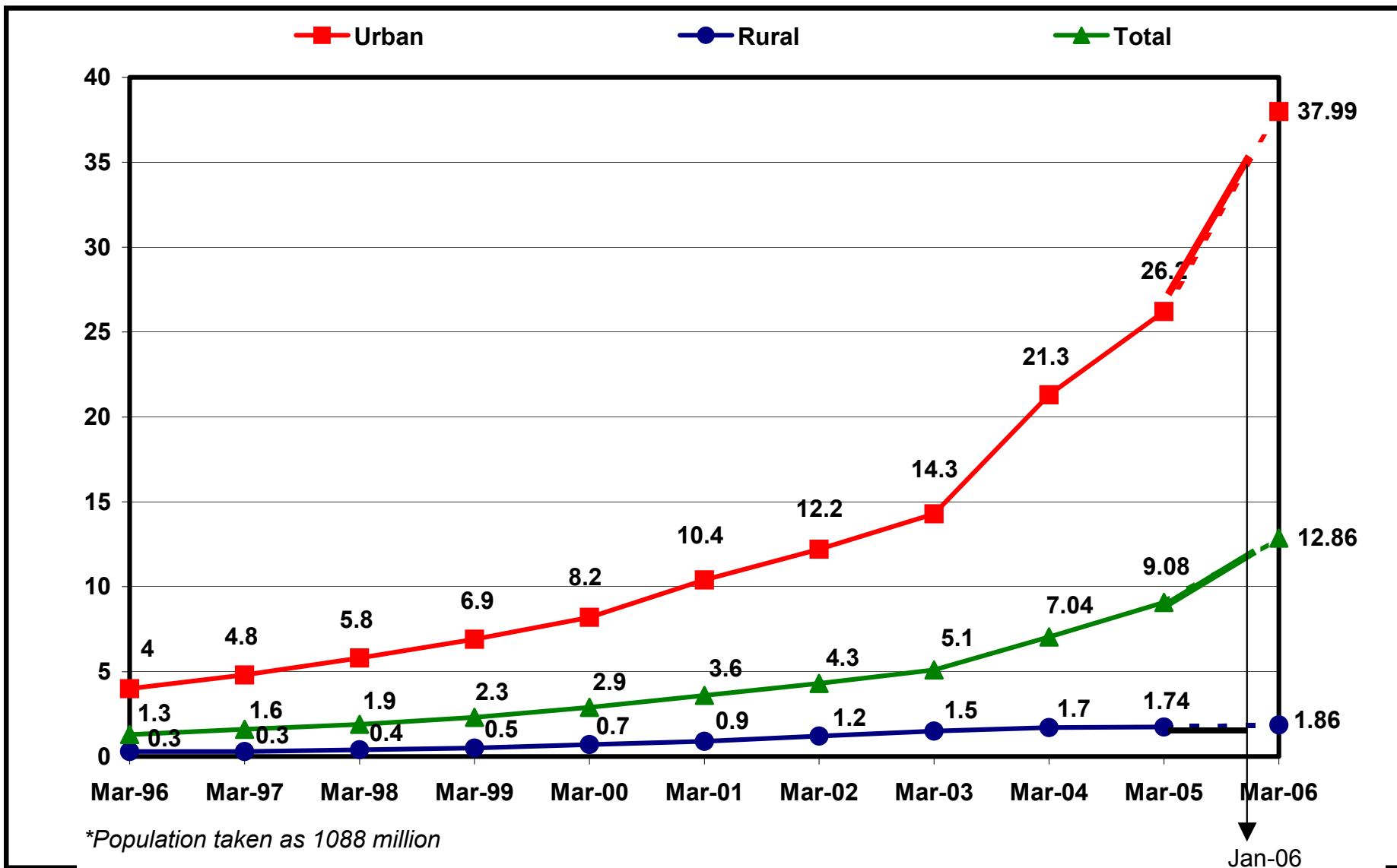
Digital Opportunity Index (DOI)

- WSIS in Dec. 2003 established a mandate to create a composite index called DOI to measure
 - Extent of the digital divide
 - Global progress of ICT integration and adoption
- DOI Components
 - Infrastructure
 - Opportunity
 - Utilization

Telecom Services in rural India

- Monitor growth of telecom services in rural India
- Monitor disbursement of USOF for various activities supported by USOF
- Data used to provide recommendations to the Government for effective and efficient USO policy

Rural-Urban Tele-density – widening Gap



Economic Performance indicators

- Growth trend
 - Prepaid & Postpaid subscribers
 - Service areas
 - Service provider
- Revenue analysis
 - ARPUs
 - Prepaid/Postpaid
 - Service areas
 - Private/PSUs
 - Revenue from different sources (eg. SMS, roaming, other value added services, etc.)
 - Market share of service providers on revenue basis

Economic Performance indicators

- Usage pattern
 - MOUs
 - Prepaid/Postpaid
 - Service areas
 - Service Providers
 - SMS
 - Incoming & Outgoing minutes
 - Local/NLD/ILD traffic
- Tariff trends
 - Lowest tariff
 - Prepaid & Postpaid Services

Accounting Separation Reports

Accounting Separation Regulation

- TRAI had notified the Regulation on “The Reporting system on Accounting Separation Regulation, 2004” to call for audited reports on separated accounts .
- Service providers are required to submit accounting statements separately for every service and products/network services for each of the Licensed areas .
- Service providers also required to provide very detailed non-financial information on subscribers, ARPU, traffic details, capacity available and its utilisation, POIs, tariff schemes, network architecture, future roll out plans etc.

Salient Features of Accounting Separation Regulation

- Service providers every year provide accounting separation reports on the basis of historical cost accounting and every second year on the basis of current cost accounting.
- Availability of more detailed and disaggregated information on revenues and costs on regular basis from various service providers .
- The Indian Accounting Separation System is different as it captures network element wise cost. The network element wise cost is then apportioned to various products. The final profit and loss statement of a product/service is based on apportionment cost of network elements.
- All reports filed by the service providers are audited and reconciled with aggregated annual accounts of the company

Salient Features of Accounting Separation Regulation (Contd.)

- Detailed non-financial reports are also audited and contain the following information
 - Subscriber base
 - ARPU
 - Traffic details
 - Available capacity and its utilization
 - POIs
 - Tariff schemes
 - Network architecture
 - Future roll out plans etc.

Experience of collection of accounting separation cost data

- Most service providers (Including incumbents) regularly submit their accounting separation reports.
- All access providers, NLDOs and ILDOs not only filed reports on the basis of historical costs but also on the basis of current cost accounting.
- There are many defaulters but mainly small operators providing Internet, PMRTS, Radio Paging services, etc.

How TRAI is using Accounting Separation Reports

- TRAI had fixed the cost based tariff of IPLC based on cost data available in Accounting Separation Report of VSNL .
- It was a complex exercise segregating costs between satellite circuits and cable circuits and then apportioning costs to various products like telephony, IPLC and other data management services.
- Calculation of Access Deficit
- Calculating cost of carriage, fixed network and mobile network termination charges.
- TRAI now has detailed licensed area wise information of cost and revenue for all products and services which is used in various studies.
- Helps to examine complaints against vertical price squeeze, predatory pricing, bundling of services etc.
- Helps TRAI to monitor and measure financial performance of individual telecom products/network services and information about disaggregated costs to the level of network elements.

Inputs for Telecom indicators

- Accounting separation reports are treated as Confidential as they contain commercially and financially sensitive information .
- However , the following indicators of the sector are available:
 - Total capital investment in telecom sector
 - Return on capital employed (RoCE) of telecom industry
 - Profitability and investment of each products/network services
 - Profitability and investment of each services
 - Range of Rate of capital cost of telecom industry

QoS parameters

- Mobile services

- Network Performance

- Accumulated down time of community isolation
 - Call Set-up Rate
 - Service Access Delay
 - Blocked Call Rate
 - Call Drop Rate
 - % of connection with good voice quality

QoS parameters

- Mobile services

 - Customer Help Line

 - Response time to customers for assistance

 - Billing Complaints

 - Complaints per 100 bills issued
 - % of complaints resolved within 4 weeks
 - Period of all refunds/payment due to customers from the date of resolution of complaints

 - POI Congestion

 - < 0.5%

Spectrum related issues

- Efficient utilisation of spectrum
- Spectrum allocation
- Spectrum pricing

Publication of Telecom Services Data and its Relevance

**TRAI publishes the periodical reports
regarding performance of Telecom
Operators (Since June 2003)**

- Contents :-

- 1. Subscriber Growth**
- 2. QOS (Quality of Service)**
- 3. Usage (Minutes of Use)**
- 4. ARPU (Average Revenue per User)**
- 5. List of Service Providers**

- Periodicity :-

- 1. Monthly basis for Subscriber growth**
- 2. Quarterly for all parameters**

Relevance of Data

- **Supply side indicators**
 - Investment indicators
 - Market indicators
 - Penetration of various telecom services
 - Tariffs
 - IUC
 - QoS
 - Employment Indicators
- **Demand side indicators**
 - Household telecom penetration
 - ICT usage pattern
 - Business telecom penetration
 - Level and frequency of utilization of e-commerce

Relevance of Data

1. Tracking the growth trends & monitoring teledensity with reference to targets
2. Analyzing the traffic pattern of various Services
3. Comparing the growth of Subscribers base of Private Operators V/s PSU Operators to monitor the impact of liberalization.
4. Analysis of tariff reduction trend
5. Financial Analysis of Revenues of Operators & the impact of reducing tariff on revenues
6. Financial Analysis for the purpose of costing & Interconnect usage charge (IUC)
7. Measuring Regulatory Performance

Usage by Stakeholders

- 1. Competing Service Providers to monitor the growth**
- 2. Analysts & Consultants**
- 3. Research Scholars**
- 4. Financial Institutions**
- 5. Statistical cells of concerned Ministries**
- 6. Regulators and Policy makers**
- 7. Various industry associations**

Relationship with other indicators

- 1. Growth of Subscriber base V/s Sale of Handsets**
- 2. Rural Telecom Growth with Consumer goods (FMCG)**
- 3. GDP V/s Telecom Growth**
Adjusting GDP per capita on PPP basis
- 4. Other Sector (Power etc) V/s Telecom**
Employment indicator

New Trends

- **Comparison of Mobile growth with China (January 2006)**
- **Comparison of Mobile Tariff with neighboring Countries (February 2006)**
- **Comparison of Mobile ARPU with other Countries**
- **Publication of Minutes of Use for Internet telephony & growth trend**

Latest Subscriber Base Criterion

- Subscriber Base
 - Total International Mobile Subscriber Identity (IMSI) in HLR MINUS
 - Subscriber retention period expired (Validity period + Unused Airtime carry forward period + Number retention period or 90 days whichever is less)
 - Test/service Cards
 - Employees
 - Stock in hand/in distributional channels (Active cards)
 - Service suspended pending disconnection

Practical problems

- **Availability of Data by Service Providers**
- **Sensitivity of data ?**
 - **What are commercially sensitive data.**
 - **What are the type of data that can be published**

Price monitoring

- Key challenges
 - Technological development and Convergence
 - Bundling of services &
 - Flat rate packages for multiple services
 - Number of tariff plans
 - Tariffs change rapidly
 - Uniformity in definition

Thank You