



**Telecom Regulatory  
Authority of India**

# **Chinese Growth : Chinese Numbers**

***7<sup>th</sup> Annual NBER-NCAER Neemrana Conference 2006***

***17<sup>th</sup> January, 2006.***

**I**

**Regulatory Strategies for increasing Competition in network industries**

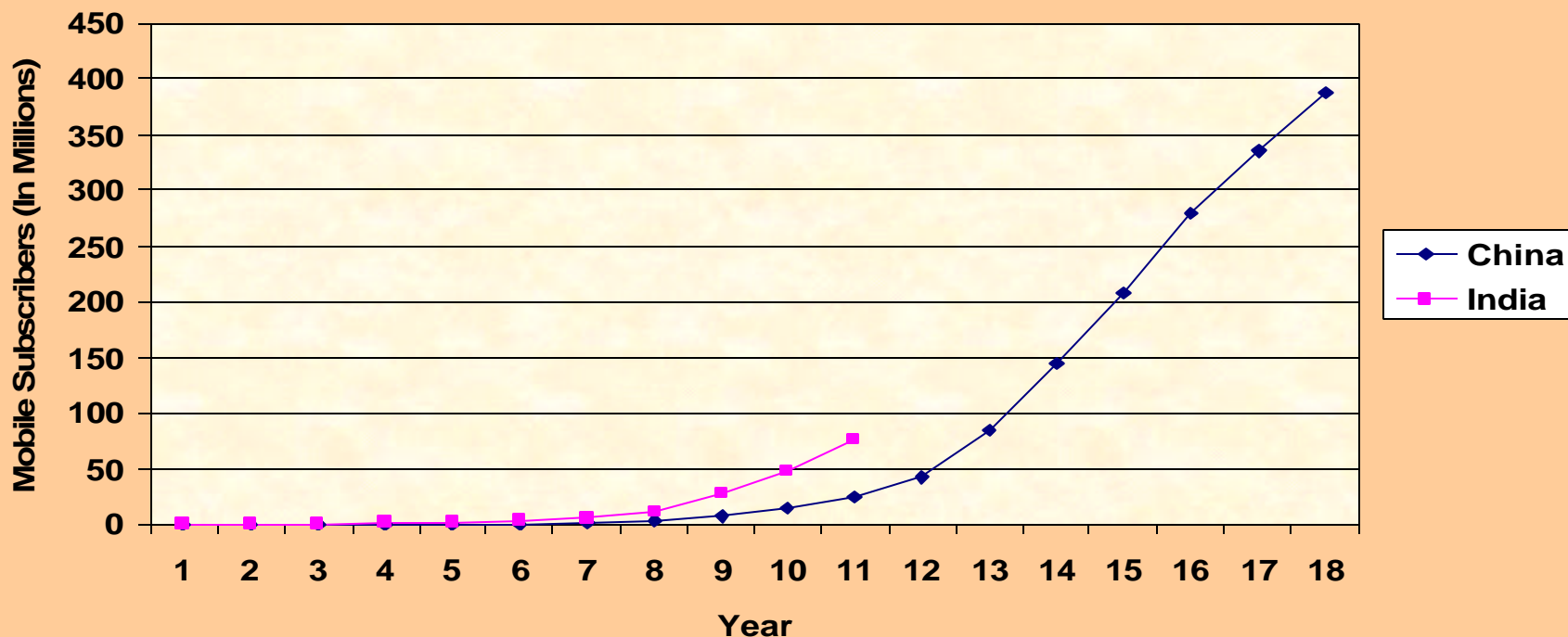
**II**

**Increased Competition leads to lower tariffs leading to high subscriber growth**

**III**

**Other Strategies for increasing teledensity**

### Mobile-India-China Performance



Mobile subscribers (in Millions)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
China	0.003	0.01	0.02	0.1	0.2	0.6	1.6	3.6	6.8	13.2	24	43	85	145	207	279	335	388
India	0.03	0.22	0.8	1.1	1.6	3.1	5.5	10.5	28	48	76							

#### Introduction to Mobiles:

China year 1 : 1988      Year 18 : 2005

India year 1 : 1995      Year 11 : 2005

*Note: Values are for end of year December*

- So far, on any year to year basis, after late start of mobiles in India, we have done better than China
- We must continue – but corrective measures required for phase III (2006-07)

# Monthly Growth (Mobiles)

## China : India

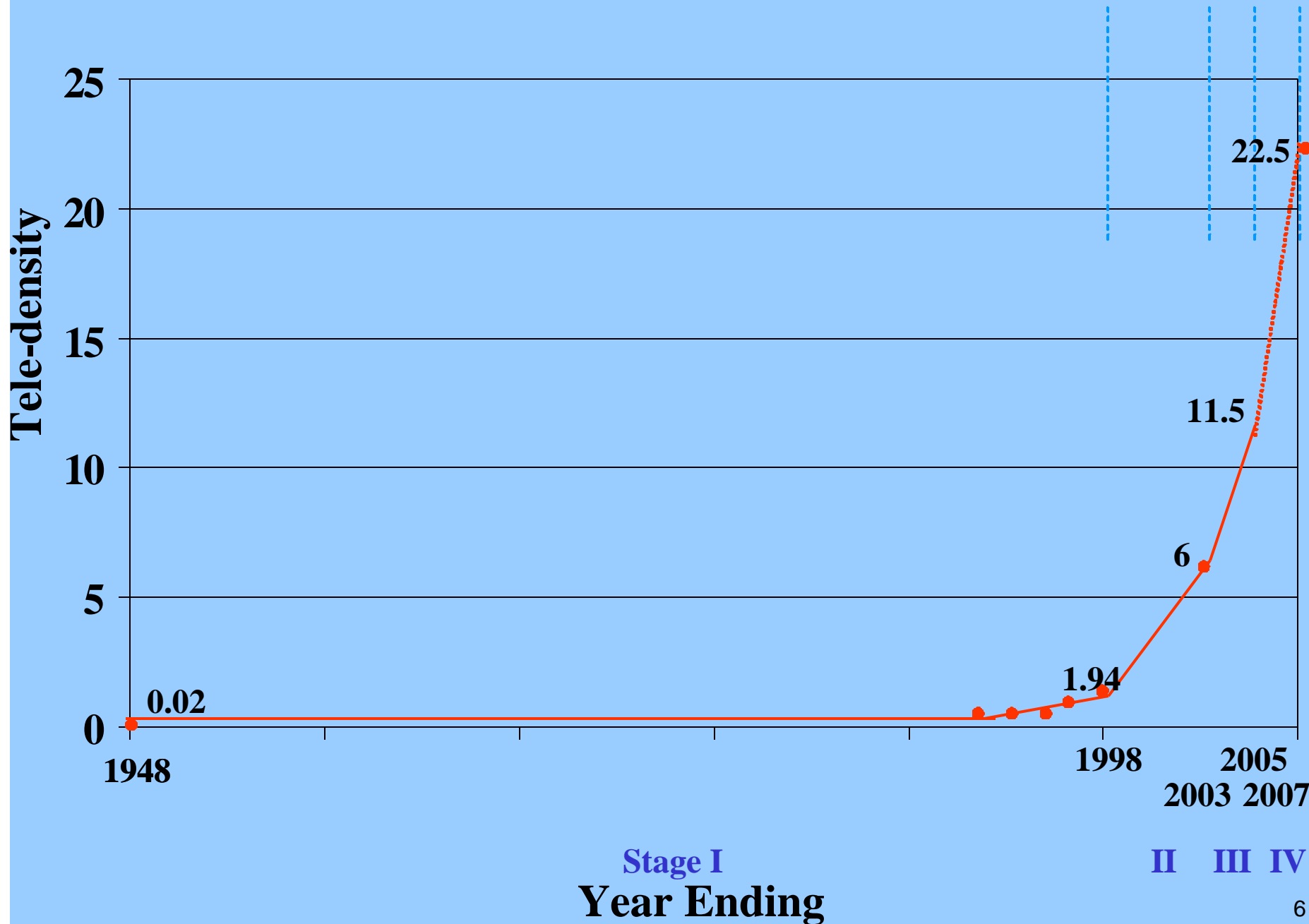
Monthly Additions (In Million)

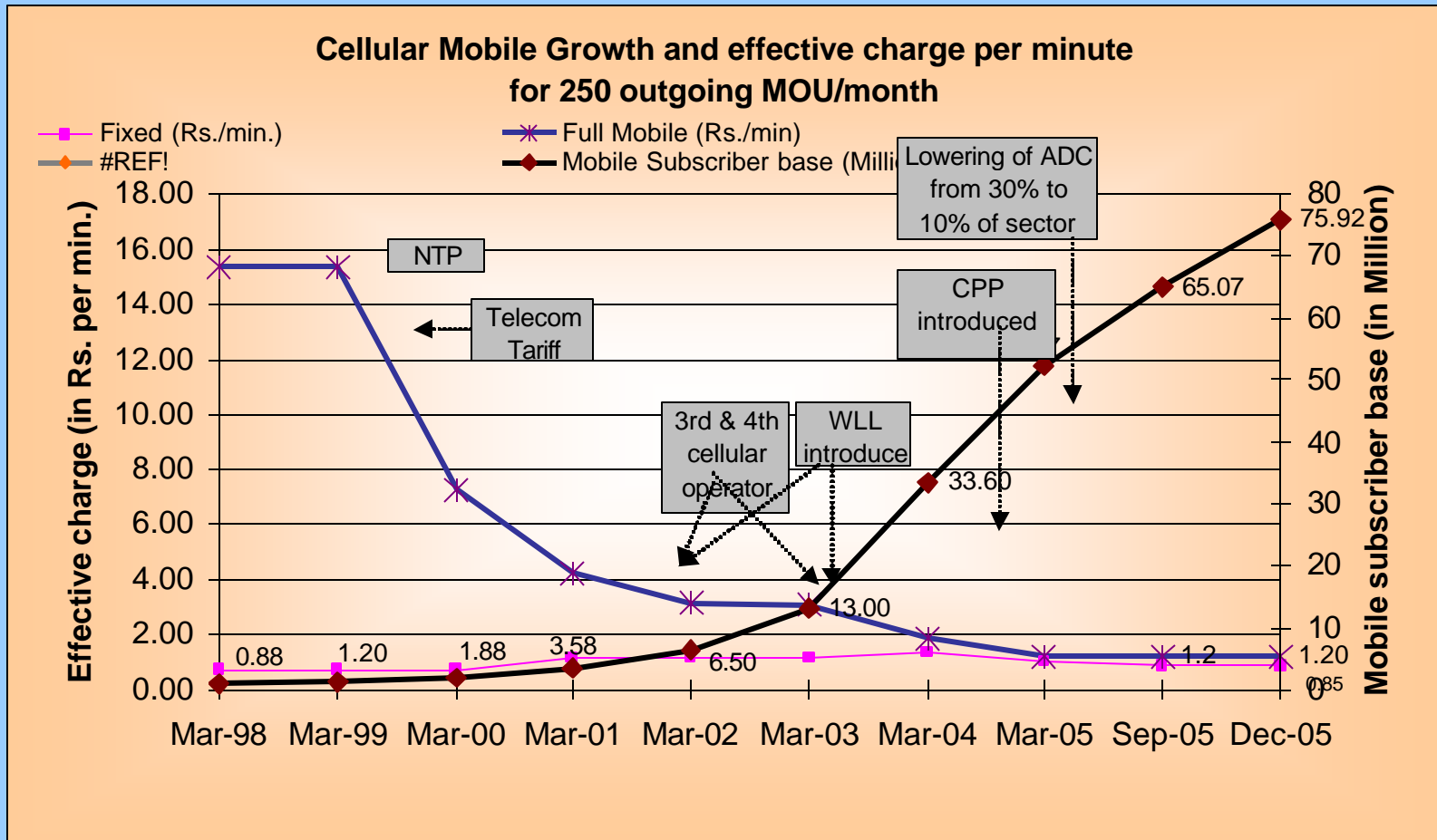
	1997	1998	1999	2000	2001	2002	2003	2004	2005	Dec.05
China	0.5	0.9	1.6	3.5	5.0	5.0	6.0	4.7	4.5	NA
India	0.05	0.03	0.04	0.13	0.2	0.4	1.4	1.7	2.3	4.5

## Sales of handsets : Increase in the number of subscribers

<b>Year</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>Dec. 2005</b>
<b>Handsets sales (Nos. in millions)</b>	<b>18</b>	<b>23</b>	<b>32</b>	<b>4.0</b>
<b>Mobile Additions (Nos. in millions)</b>	<b>17.5</b>	<b>19.5</b>	<b>28</b>	<b>4.5</b>

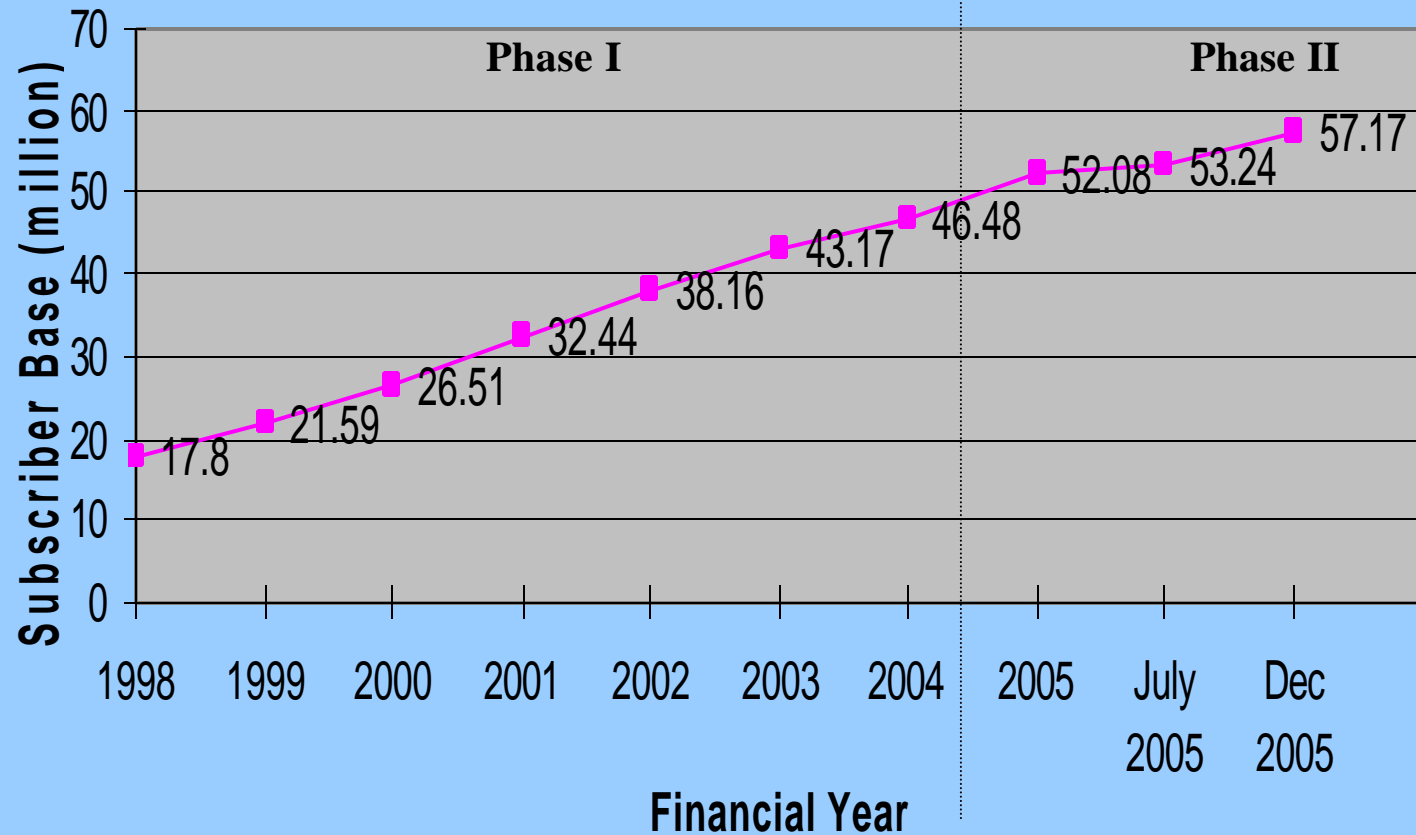
# Telecom Growth – The Changing Scenario





- **TRAI facilitated huge reduction in forborne tariffs in 2003-05**
- **Measures indicated in boxes – and by increasing competition**
- **Also, by allowing handsets sales in instalments.**
- **Mobile growth stepped up significantly – once mobile and fixed line tariffs became equal**
- **Mobile then became the telephone of the working class**
- **Mobile growth in 2003-04 and 2004-05 > average mobile growth in earlier years X 12**

# PSU's Operators Subscriber base

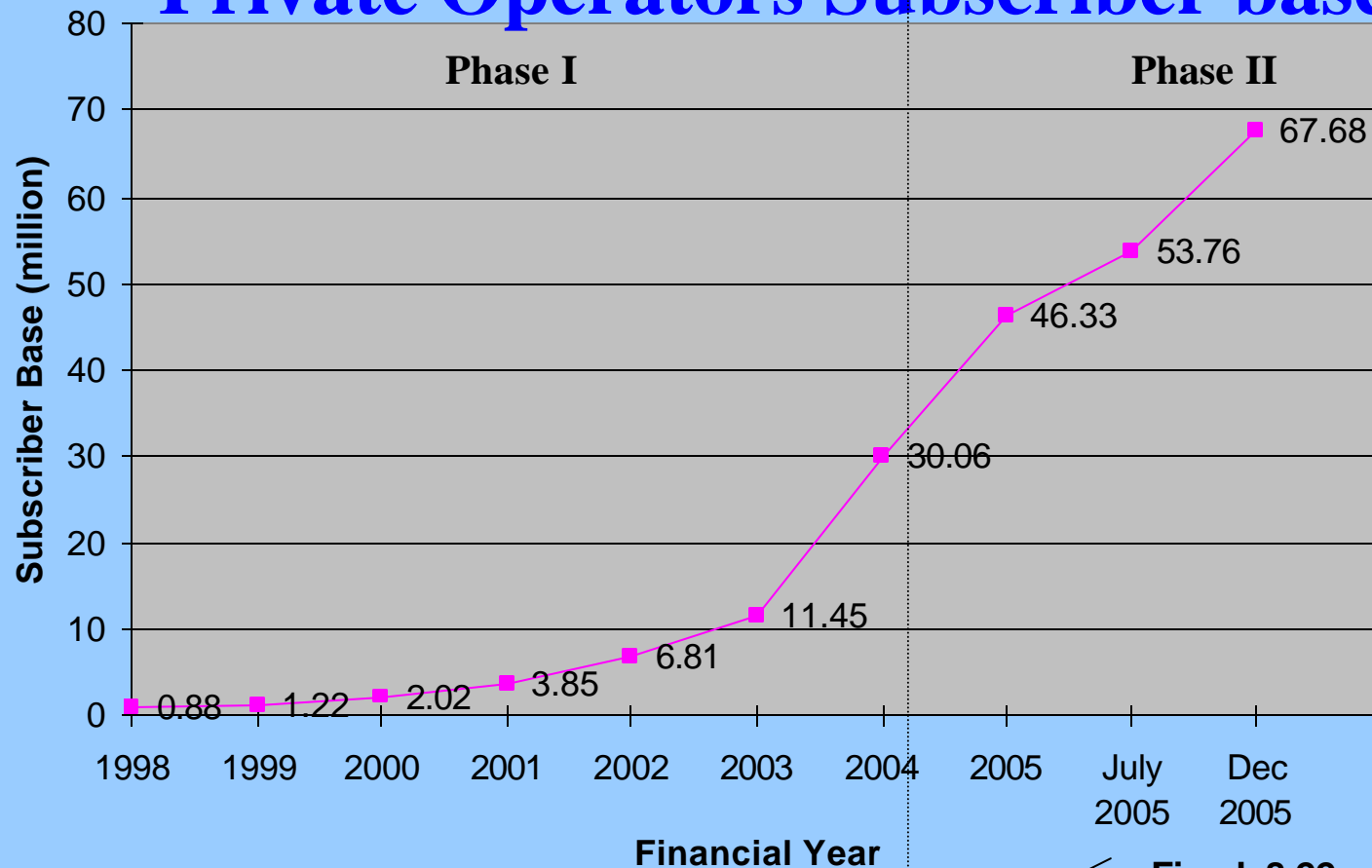


**Fixed 40.70 million**

**Mobile 16.47 million**

- **Growth 1998-2005 = 34.28 million subscribers**
- **5million/year in comparison to 0.35 million/year in pre-reform period.**  
**Only difference – competitive environment**
- **PSU operators have shown remarkable growth in competitive environment.**

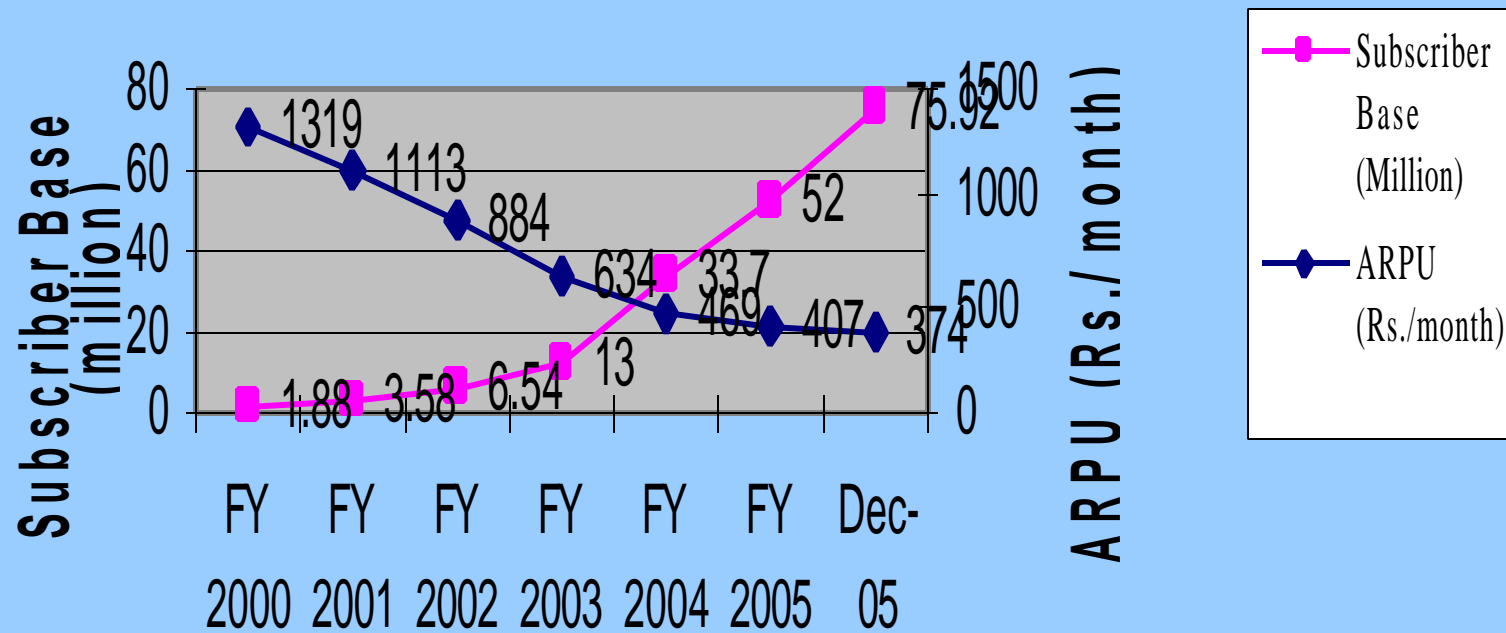
# Private Operators Subscriber base



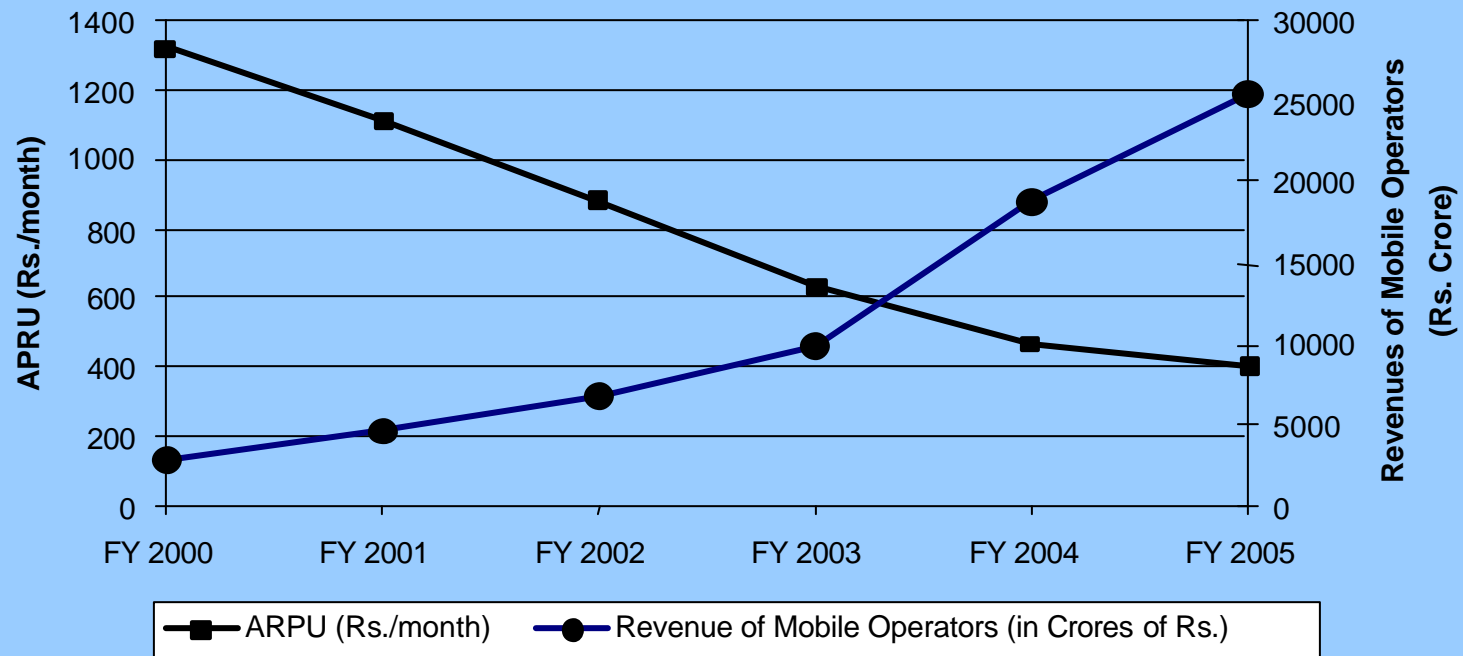
Fixed 8.22 million  
 Mobile 59.46 million

- Growth 1998-2005 = 45.45 million subscribers
- Private operators have contributed very largely to post 1998 growth
- Private operators have contributed primarily in mobile growth due to lower costs
- Liberalisation aimed at private participation and investment in telephony
- Private telephones overtook public telephone in July 2005 only a few years after liberalisation
- This was possible due to appropriate regulatory regime

## Growth of Mobile Subscriber base with reducing ARPU



### As ARPU has fallen, revenues have grown



## Investment in Telecom Sector and Subscriber Numbers

	Approximate Investment upto March 2005 (Rs. In Thousand Crores)	No. of Subscribers	Market share (%age)
PSU Operators	<b>94</b>	<b>57.17</b>	<b>45.79</b>
Private Operators	<b>51.5</b>	<b>67.68</b>	<b>54.21</b>

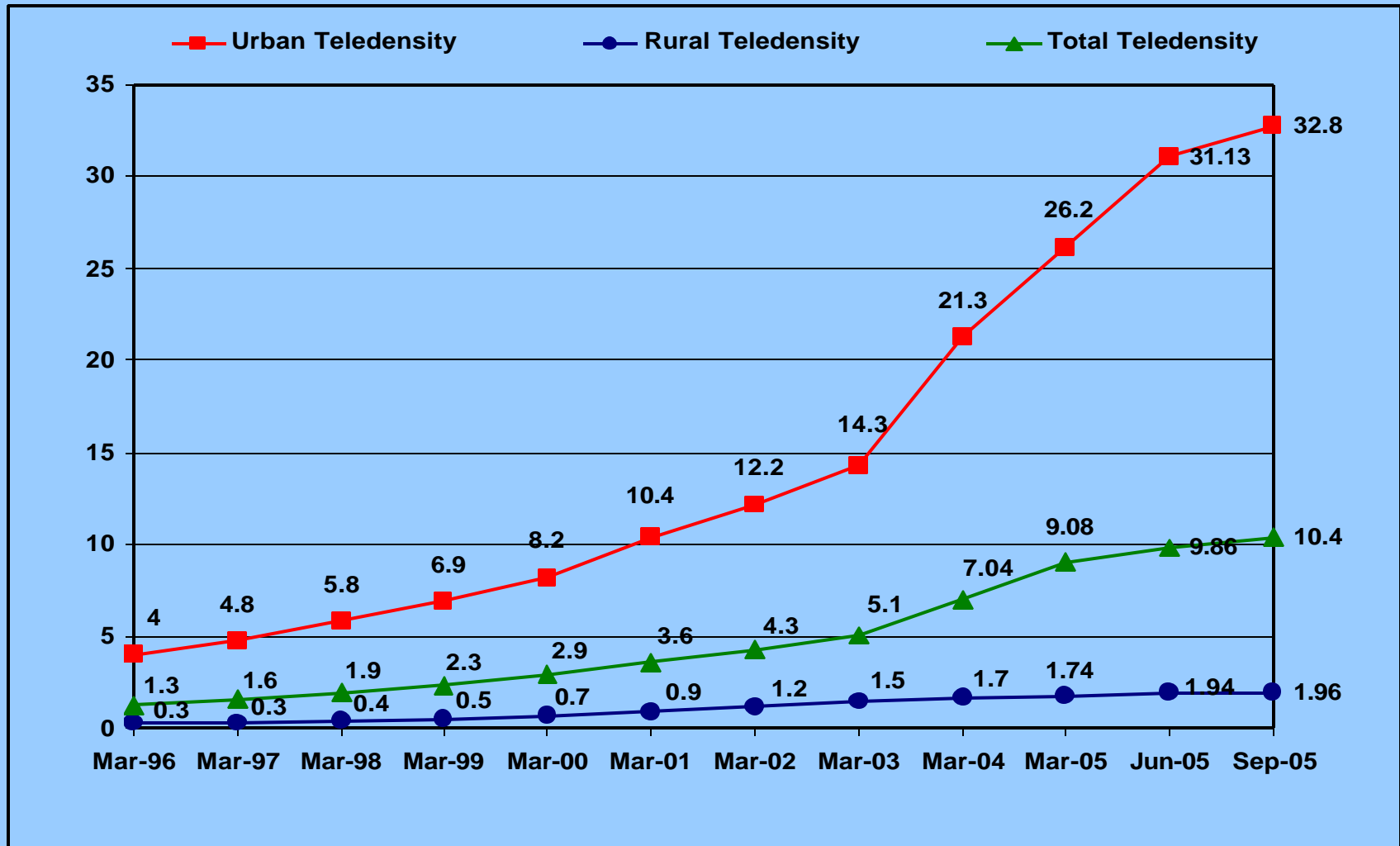
- Aim of liberalization was more investment/growth.
- Has this been fulfilled in telecom sector?

## Call charges per Minutes of Use, ARPU and Termination Rates per minute for mobile service in different countries (June 04)

Name of the country	Call charge per minute	Minutes of Use per subscriber per month	ARPU (Average Revenue Per User)	Termination rates per minute	
				Fixed	Mobile
	US\$	Minutes	US\$	US\$	US\$
Australia	0.24	159	43	0.016	0.152
Brazil	0.11	92	11	0.020	0.080
China	0.04	261	10	0.010	0.025
Switzerland	0.45	119	59	0.017	0.163
Japan	0.33	156	63	0.022	0.130
India	0.04*	309	11	0.007	0.007

- \* Has come down to 0.03 in 2005 – lowest in the world
- Since the tariffs are low – there is huge unmet mobile demand in rural areas – only mobile towers have to reach
- Some low end ARPUs being offered by operators are \$ 4 per month and entry cost (handset price) \$35
- At these rates, huge market is waiting to be tapped
- Our lowest termination rates encourage aggressive competition at origination of calls

# Urban : Rural Teledensity



## Present Coverage of Mobile Networks (2004-05)

(Population Coverage 25-30%)

	<i>By area</i>	<i>Population Coverage</i>
<b>Towns</b>	~1700 out of 5200	~275 Million
<b>Rural areas</b>	Negligible	Negligible

## Proposed Network Coverage by 2006; operators plan

(Population Coverage 75%)

	<i>By area</i>	<i>Population Coverage</i>	<i>Actual coverage Dec. 2005</i>
<b>Towns</b>	~4900 out of 5200	~300 Million	<b>400 million</b>
<b>Rural areas</b>	~350,000 out of 607,000 villages	~450 Million	

**The rural areas have demand**  
**Demographical Analysis (2001):**  
**Penetration of households with key consumer durable assets**

S. No.		All India	Urban + semi-urban	Rural	No. of households with key durables (in million)	
					Urban + semi-urban	Rural
	<b>Total Households (Millions)</b>	<b>192</b>	<b>54</b>	<b>138</b>		
<b>1</b>	<b>Bicycle</b>	<b>44%</b>	<b>46%</b>	<b>43%</b>	<b>24.84</b>	<b>59.34</b>
<b>2</b>	<b>Radios</b>	<b>35%</b>	<b>44%</b>	<b>32%</b>	<b>23.76</b>	<b>44.16</b>
<b>3</b>	<b>Television</b>	<b>32%</b>	<b>64%</b>	<b>19%</b>	<b>34.56</b>	<b>26.22</b>
<b>4</b>	<b>Two wheelers (Scooters &amp; Motorcycles)</b>	<b>12%</b>	<b>25%</b>	<b>7%</b>	<b>13.5</b>	<b>9.66</b>

## Urban/Rural income-wise distribution of households (In millions)

<b>Income Group</b>	<b>Rural Households</b>	<b>Urban Households</b>
<b>Lower</b>	<b>5887 (47.94%)</b>	<b>931 (18.96%)</b>
<b>Lower Middle</b>	<b>4277 (34.83%)</b>	<b>1658 (33.76%)</b>
<b>Middle to High</b>	<b>2116 (17.23%)</b>	<b>2322 (47.28%)</b>
<b>Total</b>	<b>12281 (100%)</b>	<b>4911(100%)</b>

## Number of cable homes and number of fixed line telephone subscribers

Figures in million – (Year 2003)			
S. No.	Name of the country	No. of cable TV + DTH subscribers	No. of fixed line connections
1	Australia	1.55	10.82
2	China	105.00 #	263.00
3	United Kingdom	10.50	34.90
4	Japan	8.10	71.15
5	Korea	11.94	22.88
6	Taiwan	5.30	13.36
7	Thailand	0.43	6.60
8	Unites States	94.97	181.6
9	India*	61	47

- India numbers are for 2005.
- There is no country other than India where cable TV connections exceed fixed line phones
- This indicates a huge demand in India for entertainment and multi-sourced news and information
- Hence triple play networks in India will be hugely successful

## Existing USO regime – Implementation till 2010

(Figures in Rupees Cr.)

- **Public Telephones in Villages** – **3,344**
- **Rural Telephones** – **22,010**
- **ADC for rural telephones to be covered under existing USO regime from 2008 to 2010** – **5,000**
- ***Total*** – ***30,354***
- **In addition, funds have already been given from ADC since 2003 and some more may be allotted till 2008** ~12000
- **After the investment shown above, we will achieve a rural tele-density of 4%**

## Proposed USO regime

(Figures in Rupees Cr.)

• One-time subsidy for 20,000 BTSs	– 7,200
• Bandwidth subsidy	– 2,080
<b>Total</b>	<b>– 9,000</b>

**THANK YOU**