Indian Mobile Services Sector - Struggling to maintain sustainable growth

Cellular Operators Association of India

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pwc

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1. Executive summary

The Indian Mobile Services sector is witnessing disturbing trends, which, if not addressed in a timely manner, could hurt the National Policy objective of spread of affordable Telecom Services.

Key Trends being witnessed include:

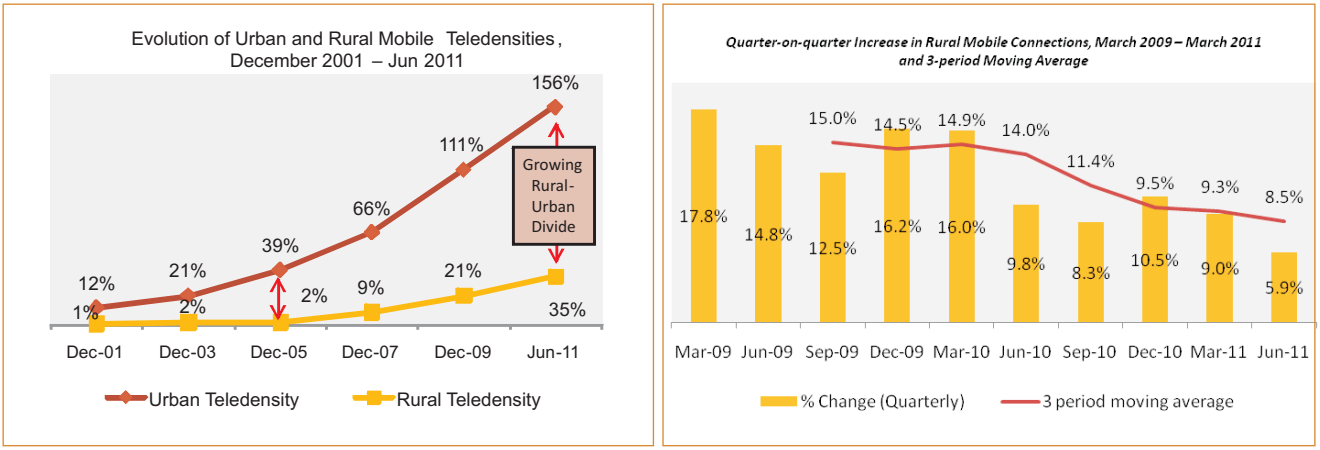
- Stagnation in Revenue
- Declining Profitability and Return on Capital Employed
- Slowdown in Investments and Expansion of services
- Increase in Costs

The Indian mobile industry has been successful in providing affordable telecom services, thereby empowering the common man, driving wider economic growth across the country and contributing to government finances.

However, after a phase of robust growth over the recent past, the Indian telecom juggernaut appears to be slowing down. The number of net mobile connection additions in May 2011 was around 35% less as compared with March 2011.

The slowdown in the sector should be an area of great concern as the growth journey of the sector is only partially complete. Considering that only ~70% of the reported connections are active and ~15% of subscribers use multiple SIMs [1], more than half of the people in the country have not yet subscribed to mobile services and most of these reside in rural areas [2]. This is evidenced by rural mobile teledensity of only ~35% as compared with urban mobile teledensity of ~156% in Jun 2011.

Chart I: Growing Rural-Urban Divide and Slow-down in Growth in Rural Mobile Connections



Source: TRAI. PwC Mobile Broadband Outlook 2010. PwC Analysis.

It is evident that the urban markets are almost saturated whereas there is a lot of untapped demand in rural markets. Therefore, additional investments are required for rolling out services to the unconnected population, primarily in rural areas. Moreover, with India's broadband penetration [3] being abysmally low at ~1%, investments are needed to deploy 3G / BWA services and meet the latent demand for broadband across urban and rural India.

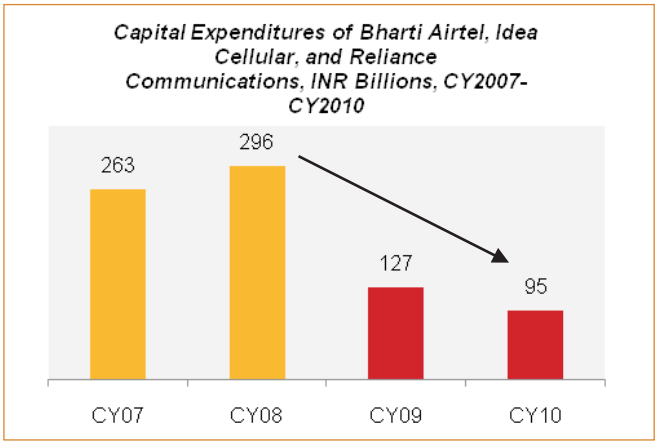
While large scale additional investments are the need of the hour, the sector is witnessing a reverse trend. There has been a significant slowdown in FDI as well as capital expenditures in the telecom sector.

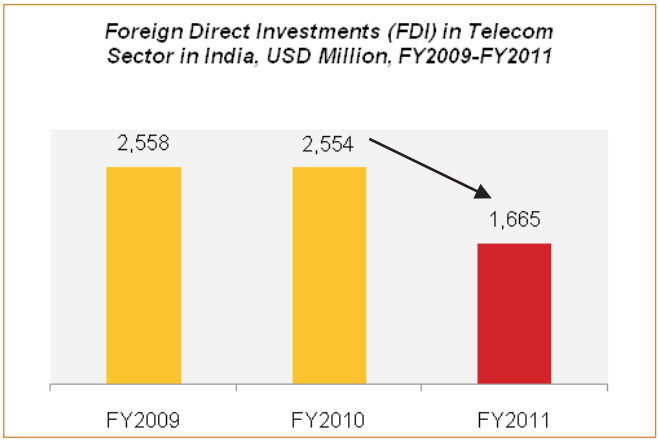
[1] Subscriber Identity Modules

[2] TRAI had reported around 840 million connections (not unique subscribers) in India in May 2011

[3] Connections per 100 people

Chart II: Slowing Capital Expenditures and Foreign Direct Investments in the Telecom Sector



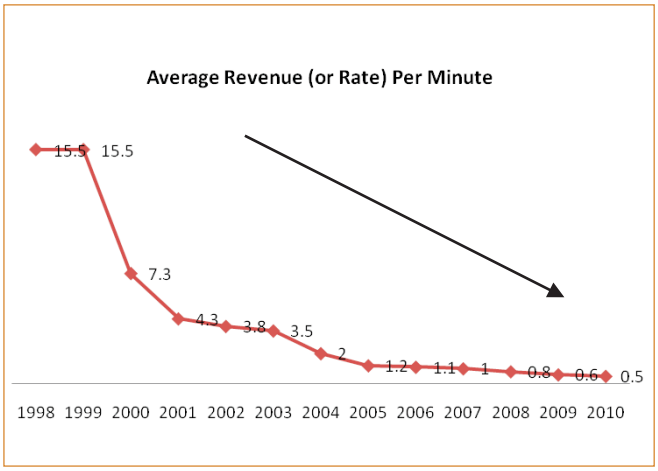


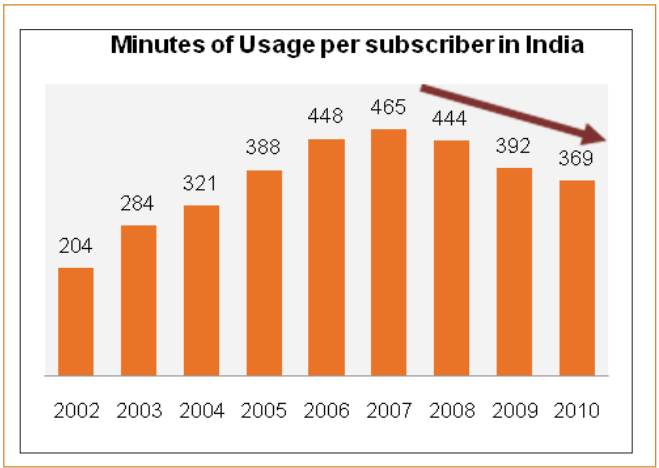
Source: Global Wireless Matrix 1Q11, Bank of America Merrill Lynch, April 2011.Department of Telecom (DoT) Government of India. Department of Industrial Policy & Promotion Government of India.

This is explained to a great extent by the poor and deteriorating environment - operational and financial- faced by operators. The sector is now characterized by an overcrowded market, fragmented industry structure, steep decline in tariffs, falling Minutes of Use, falling ARPU as well as declining revenue growth, and high network operating expenses as well as regulatory costs.

Intense competition with 10 to 12 operators in a service area has led to a free-fall in tariffs. However, this has not been matched by an increase in Minutes of Use per connection per month (MoU or data usage), which on the contrary, have witnessed a drastic fall from a peak of 465 minutes in 2007 to 369 minutes at the end of 2010, a decline of more than 20%. The decline in the MoUs even with falling tariffs point to the limitation of the price elasticity of MoUs. Thus negative influence on revenues due to falling tariffs is not being compensated by increase in the MoUs.

Chart III: Significant Reduction in Call Tariffs and Minutes of Usage (MoU)

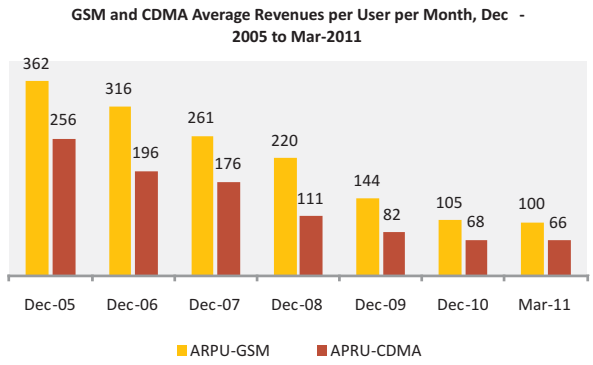


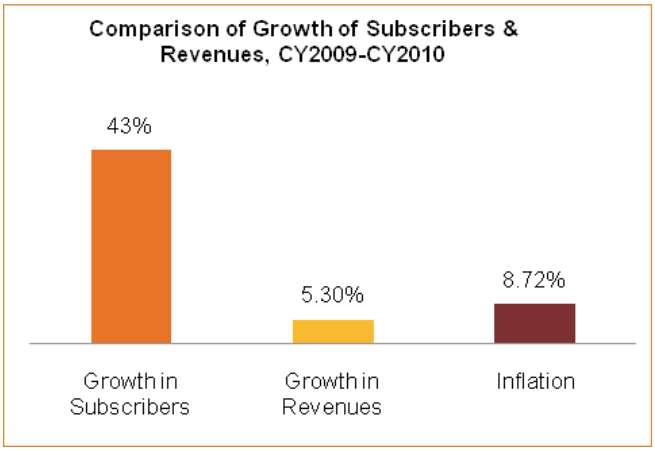


Source: TRAI. PwC Analysis.

As a result, average revenue per user per month (ARPU) has witnessed a steep fall and India currently has one of the lowest ARPUs in the world at approximately one-third and one-tenth the average levels in developing and developed markets respectively. The consequence of these trends is that the telecom market revenues have started to stagnate. Although the number of connections grew by ~43% in Cy2010 [4], the telecom market revenues increased by a mere ~5%.

Chart IV: Reduction in ARPUs and Stagnation of Sector Revenues





Source: TRAI. The Economist, PwC Analysis

While the revenue growth is declining, driven by inflation, the cost burden of operators continues to increase. Network operating expense of all operators has increased significantly with time. Also, the operators have been incurring additional expenses on account of compliance to regulatory initiatives such as MNP, UCC, subscriber verification and stricter EMF requirements and lawful interception. As a result of being squeezed from all sides, the financial position of operators is under significant stress. The PAT margins of operators have deteriorated significantly and in fact, are negative (FY 2010) for a large number of operators.

Chart V: PAT Margins of Selected Operators, FY2007-FY2011

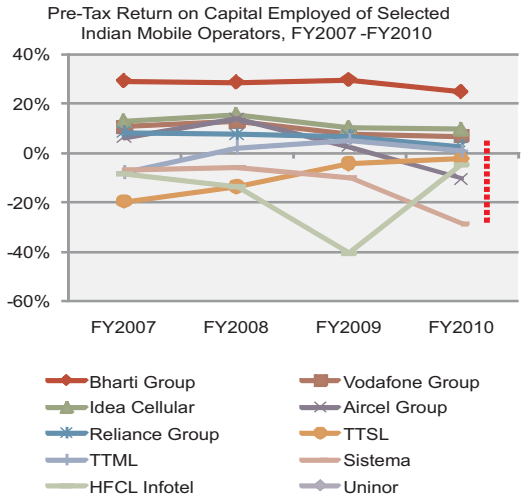
	FY2007	FY2008	FY2009	FY2010	FY2011
Vodafone	17%	11%	0%	-3%	0.01%*
Idea Cellular	11%	16%	10%	9%	5%
Aircel	35%	9%	-8%	-66%	
Reliance	21%	18%	30%	4%	-6%
Bharti	23%	24%	23%	26%	20%
TTSL	-46%	-35%	-33%	-21%	
TTML	-22%	-7%	-8%	-14%	2%
Shyam Sistema	-53%	-158%	-620%	-616%	
HFCL Infotel	-42%	-57%	-96%	-11%	-93%
Uninor				-286%	
MTNL	14%	12%		-68%	-76%
BSNL	20%	8%	2%	-6%	

*Source: Annual Filings of Operators with the Registrar of Companies (Extracted in July 2011). Capitaline. India Infoline, *Company Website, PwC Analysis.*

Further RoCE (Return on Capital Employed) is low and falling, thus making it unattractive to justify investment in the sector.

[4] Calendar Year 2010

Chart VI: Pre-Tax Return on Capital Employed of Selected Indian Mobile Operators, FY2007-FY2011



	FY2007	FY2008	FY2009	FY2010	FY2011
Vodafone	11%	13%	8%	7%	
Idea Cellular	13%	16%	10%	10%	9%
Aircel	6%	14%	3%	-11%	
Reliance	8%	8%	7%	2%	
Bharti	29%	29%	30%	25%	19%
TTSL	-20%	-14%	-4%	-2%	
TTML	-8%	2%	5%	1%	-93%
Shyam Sistema	-7%	-6%	-10%	-29%	
HFCL Infotel	-8%	-14%	-41%	-5%	-5%
Uninor*				-113%	
MTNL	9%	7%	3%	0%	

Source: Annual Filings of Operators with the Registrar of Companies (Extracted in July 2011). Capitaline. India Infoline, PwC Analysis.

In an attempt to focus on improving returns from existing operations, industry players are being forced to raise tariffs. Many mobile operators in India have recently announced an increase in pre-paid tariffs[5]. Moreover, low returns in a capital intensive, high gestation industry such as telecom is also likely to have an adverse impact on future expansion activities of operators, as witnessed through recent slowing down of FDI[6] and capital expenditure in the sector, discussed earlier .

If not addressed in time, this would hurt consumer interests as well as threaten the achievement of Government objectives of availability & affordability of services and generating healthy contributions from the sector towards the exchequer. It should be noted that there has been a slowdown in telecom sector's contribution towards Government finances (through license and spectrum fees) over the past couple of years.

In the past, the policies of the Government have been conducive towards growth but today the policy framework may need to be realigned to ensure sustainable growth of the sector. The Government needs to take a proactive view towards policy interventions that would ensure continued growth of the sector and foster investment in the sector. The new National Telecom Policy should also aim to provide regulatory clarity and predictability that will support the sustenance of players and encourage the much-needed investments in the sector to drive the next avenues of expansion in rural areas and mobile broadband (3G / BWA).

[5]Source: Various press releases.

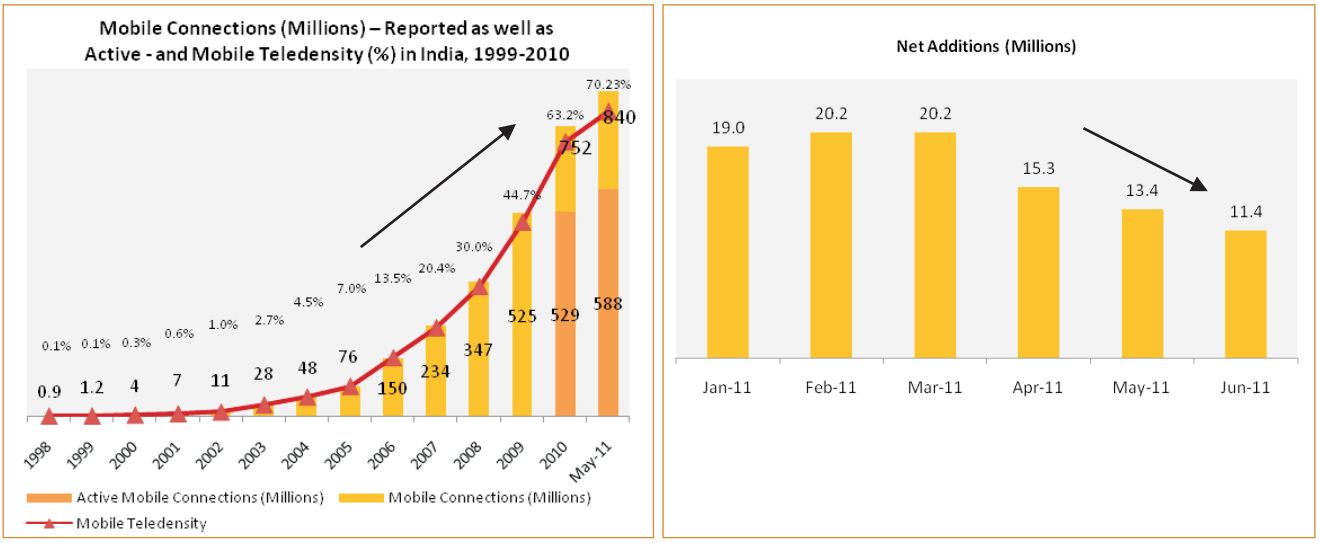
[6]Foreign Direct Investment

2. The Indian Cellular Mobile Services Industry: A Decade of Growth, Now Slowing Down

Initiatives taken by Indian mobile operators supported by regulatory policy initiatives have transformed the telecom landscape in the span of just over a decade. The initiatives include widespread network rollout, massive distribution chains, manufacturing and sourcing of low-cost handsets, low call rates, extended pre-paid validity schemes and small-value pre-paid recharges.

In little over a decade, India's mobile connections have grown from 1 million to 752 million. In the year 1998, India had less than 1 million mobile connections, whereas at the end of 2010, India had ~752 million connections, representing ~63% mobile teledensity[7].

Chart I: Evolution of the Indian Mobile Sector



Note: For May-2011, active connections refers to subscriptions that were active on the date of Peak VLR (Visitor Location Register) for the month; for Dec-2010, active connections VLR data was calculated on the basis of active connections on the last working day of the month; TRAI did not report active connections over 1998-2009.

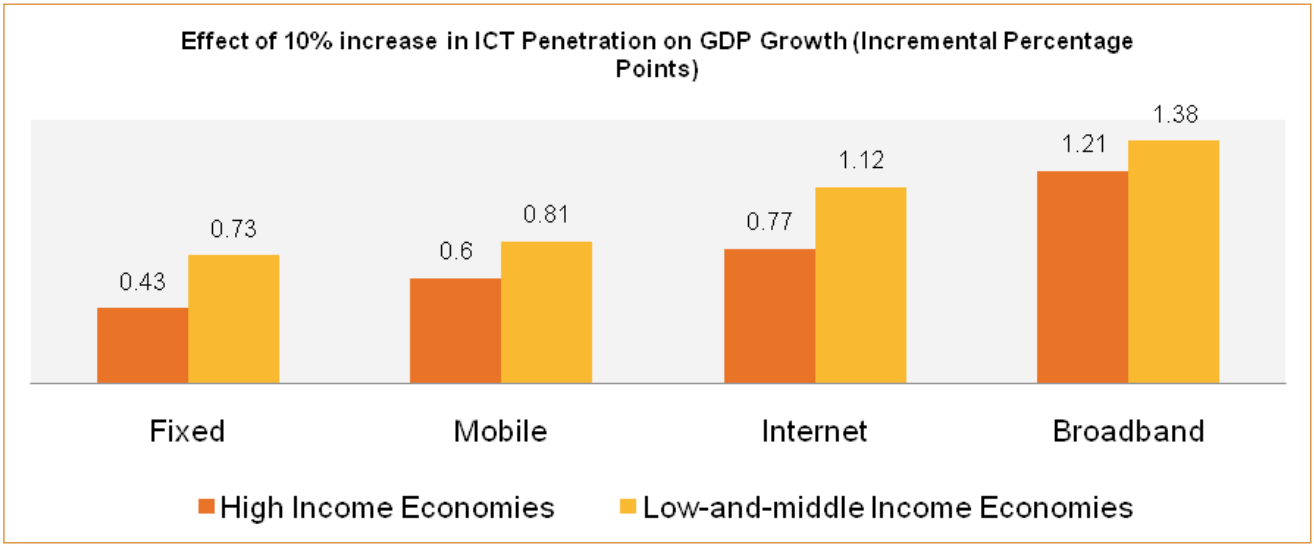
Source: TRAI (Telecom Regulatory Authority of India). ITU.

The growth of the sector has favourably impacted the lives of ordinary citizens across India by placing in their hands the power of immediate communication, which was earlier denied to them due to abysmally low fixed-line teledensity.

Proliferation of mobile services in a country has led to increased economic activity, creation of employment and rise in income levels of both individuals and companies. As per a World Bank study, for low and middle income economies, 10% increase in mobile penetration can lead to additional GDP growth of 0.81%.

[7]Number of connections per 100 population

Chart II: Impact of Growth in ICT (including Mobile Services) on GDP Growth



Source: Qiang, C. Z. W., 2009. Telecommunications and Economic Growth, World Bank

A detailed India-specific study conducted by ICRIER [8] points to an even stronger relationship between State Domestic Product (SDP) and mobile teledensity. According to the study, higher mobile teledensity leads to faster growth of states, with the growth rate being 1.2 percentage points greater for every 10% increase in the mobile teledensity [9]. Another key finding of the study was that if there was a gap among penetrations in various states, the states with lower penetration would suffer lower growth rates [10].

In India, the rapid growth of the sector has already led to significant benefits accruing to the wider society and also the economy on the whole. The mobile services industry also supports a large ecosystem of other industries/sectors such as telecom infrastructure including towers and network equipment, IT /ITES [11] services, logistics, and retail sales (sales and distribution). For instance, the Indian mobile sector is likely to provide direct employment to 2.8 million people and indirect employment to 7 million people by 2012 [12].

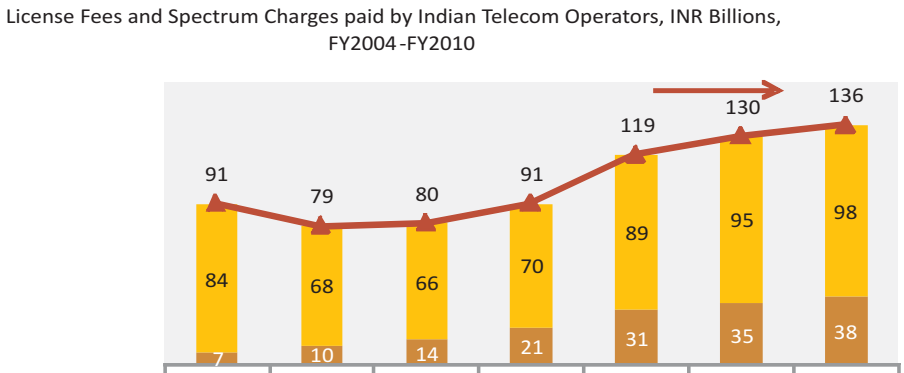
Telecom revenue as a percentage of GDP has also increased significantly from ~1.5% in 2000 to ~2% in 2010 [13]. Considering that India's GDP (current prices) has also increased more than three-fold from ~USD 480 billion in 2000 to USD ~1,540 billion in 2010[14], the growth in contribution of telecom to the overall economy is significantly high.

The government also benefits through increased tax collections from the operators themselves, their employees, and their partners/vendors. Further, the government also earns significant non-tax revenues in the form of license fees, spectrum charges, and service tax, apart from the corporate taxes paid by the operators. The following chart clearly illustrates that government finances have received a tremendous boost with the burgeoning of the mobile sector.

The Government of India also earned over Rs. 1 lakh crores (USD ~22 billion) in the recently concluded 3G / BWA auctions. Moreover, the increased level of economic activity, facilitated by mobiles, also helps generate additional revenue for the Government.

[8] Indian Council for Research on International Economic Relations
[9] Source: ICRIER The Policy Paper Series, "India: The Impact of Mobile Phones", January 2009
[10] Source: ICRIER The Policy Paper Series, "India: The Impact of Mobile Phones", January 2009
[11] Information Technology / Information Technology Enabled Services
[12] Source: Proceeding from conference on Connecting the Next 500 Million: Telecom Roadmap for the 11th Five Year Plan 200712 (http://www.efytimes.com/e1/fullnews.asp?edid=22886)
[13] Source: World Bank. Global Wireless Matrix 1Q11, Bank of America Merrill Lynch, April 2011.
[14] Source: The International Monetary Fund (IMF).

Chart III: Contribution of the Telecom Sector to Government Finances in the Form of License Fees and Spectrum Charges



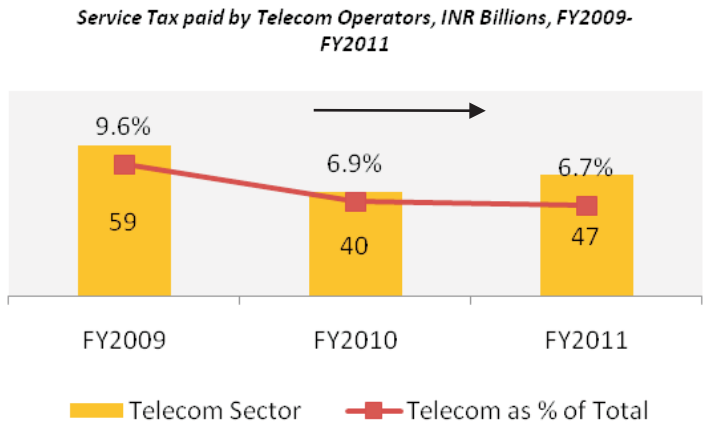
	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010
License Fee	84	68	66	70	89	95	98
Spectrum Charges	7	10	14	21	31	35	38
Total	91	79	80	91	119	130	136

Note: License fees shown for FY2008 do not include INR 125 billion (Rs. 12,500 crores) that were earned for additional UASL (Universal Access Service Licenses).

Source: DoT.

Additionally, the government also earns significant revenues from service tax levied on telecom services.

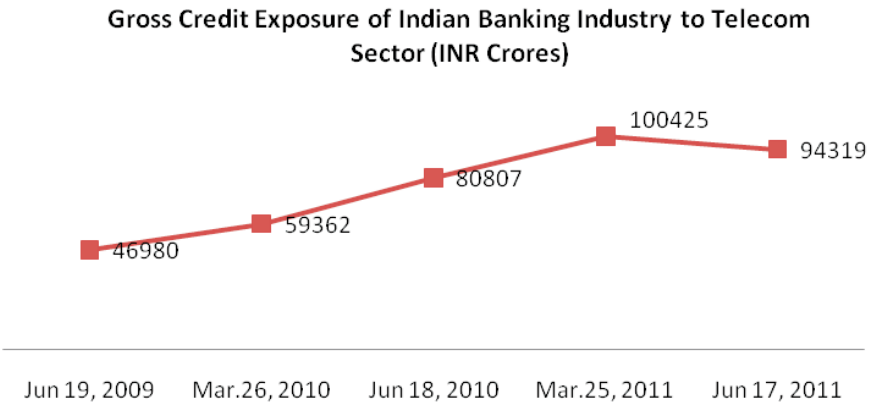
Chart IV: Contribution of the Telecom Sector to Government Finances in the Form of Service Tax



Source: Government of India's Web-site on Service Tax.

The telecom sector is closely inter-linked with other sectors of the economy. The financial services sector, banking in particular, had a gross credit exposure to the telecom sector to the tune of INR 94,319 crores in July 2011, up 101% from July 2009.

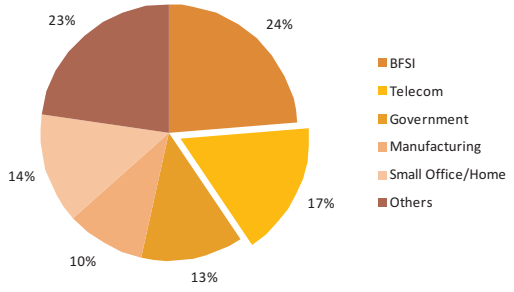
Chart V: Gross credit exposure of the Indian Banking industry to Telecom Sector [15]



Source: RBI

The Information Technology (IT) industry in the country, another significant contributor to the national exchequer, is both a buyer and supplier to the Indian telecom industry. Today the domestic Telecom industry comprises 17% of the market share of all IT revenues in the country.

Chart VI: Telecom Sector Market Share of Domestic IT Revenues



Source: NASSCOM

Thus, the Indian mobile market has taken up the mantle of a nationally important industry by playing a key role in driving the growth of the wider economy, improving the lives of ordinary citizens of the country, and contributing to Government finances. However, it should be noted that there has been a slowdown in telecom sector's contribution towards Government finances (through license and spectrum fees) due to stagnation of sector revenues, discussed in detail later. The multiplier effect that this sector has on the country's economy is now softening as a result of operational and financial challenges being faced by the sector.

[15]Data are provisional and relate to select banks which cover 95 per cent of total non-food credit extended by all scheduled commercial banks.

3. Slowdown in Capital Expenditure by Operators despite the Need for Significant Further Investments

After a phase of robust growth over the recent past, the Indian telecom juggernaut appears to be slowing down. The number of net mobile connection additions in May 2011 was around 35% less as compared with March 2011. The slowdown in sector growth should be an area of great concern as the growth journey of the sector is only partially complete especially on the broadband side.

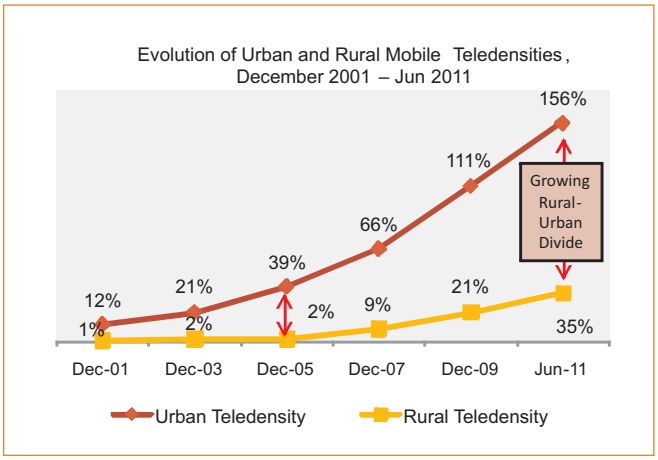
Although connections are higher, according to TRAI estimates actual penetration in India remains below 50%. Using only the number of connections overestimates the number of subscribers due to two key aspects[s] - inactive connections and usage of multiple SIM[16] cards by subscribers. As per TRAI, as at the end of May 2011, only ~70% of India's ~840 million connections (~590 million connections) were active connections[17] (refer chart 1 above). Moreover, it is estimated that at least 15% of Indian mobile users have multiple SIMs either in the same phone or in different phones[18]. Applying both filters[19] - active users and multiple SIM holders- translates to approximately 500 million unique subscribers in India.

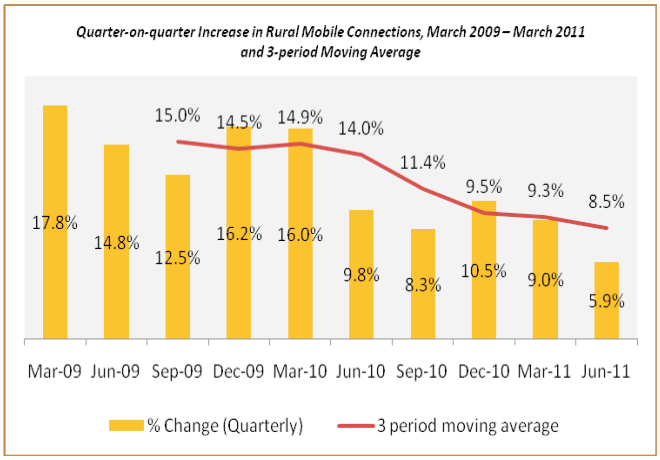
Therefore, looking at only the reported connection numbers alone does not convey accurate information about the extent of actual number of people benefiting from mobile connections. Considering that India's current population is ~1.2 billion, more than half of the population has not yet benefited by subscribing to mobile services.

3.1.1 Low Rural Mobile Penetration

India's rural mobile teledensity is only ~35%. This is only around one-fifth that of urban mobile teledensity and the gap between urban and rural teledensity has widened significantly over the past decade. Moreover, the gaps can widen even further as rural growth slows.

Chart VII: Growing Rural-Urban Divide and Slow-down in Growth in Rural Mobile Connections





Source: TRAI. PwC Mobile Broadband Outlook 2010. PwC Analysis.

Boosting rural mobile connections and bridging the rural-urban gap is extremely important to ensure that the people in rural and remote areas of the country, whose per capita income levels and access to other infrastructure/services are relatively lower, do not miss out on the tremendous opportunity provided by mobile services to fulfil their communication and information needs. Moreover, rise in mobile penetration can also stimulate the rural economy significantly, as discussed earlier, and boost rural GDP per capita levels.

To bridge the gap, operators need to make significant investments over the next few years to expand their network as well as distribution coverage and bear the higher operating expenses (in the form of tower rentals, diesel consumption, backbone expenses, etc.) of serving rural areas.

[16]Subscriber Identity Module
[17]Source: TRAI, "Highlights of Telecom Subscription Data as on 31st May 2011", July 2011.
[18]Source: http://www.livemint.com/2009/11/25223722/Multiple-SIMs-multiply-amid-ta.html, http://www.indiatechonline.com/indian-mobile-phone-numbers-90.php
[19]There could be an overlap between inactive connections and multiple SIMs owned by a subscriber; this has not been considered

3.1.2 Rollout of 3G / BWA Services

India's internet and broadband penetrations [20] are only around 1.6% and 0.9% respectively. At the end of December 2010, India had 11 million broadband connections [21], just over half the 2010 target set by the Government of India of 20 million connections. These extremely low penetration levels can be explained to a great extent by inadequate wireline infrastructure in the country. Therefore, mobile broadband (through 3G / BWA) is expected to play a significant role in overcoming the supply-side constraints and helping India to make its much delayed move into the digital age.

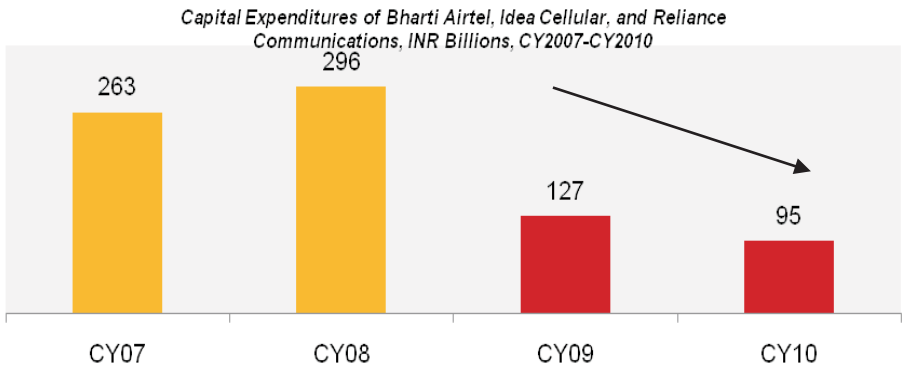
The massive latent need for 3G / BWA services due to inadequate supply side infrastructure, young and literate population, and increasing income levels resulted in tremendous excitement among operators who collectively paid Rs. ~1 lakh crore (USD ~22 billion) for licenses, as discussed earlier. The next phase of the journey should be network rollouts across the country.

These opportunities for increasing rural penetration and acquiring 3G / BWA subscribers need operators to make massive investments for rolling out 2G / 3G / BWA networks across the length and breadth of India.

3.1.3 Slowdown in Capital Expenditures

When capital expenditure needs to be rising to meet new rollout challenges, investment is, in fact, falling. Evidence indicates that mobile operators have begun to go slow over the recent past on making fresh investments into the sector. The chart below highlights that since 2008, investments in the mobile sector by the leading operators have reduced by more than half.

Chart VIII: Slowing Capital Expenditures



Source: Global Wireless Matrix 1Q11, Bank of America Merrill Lynch, April 2011.

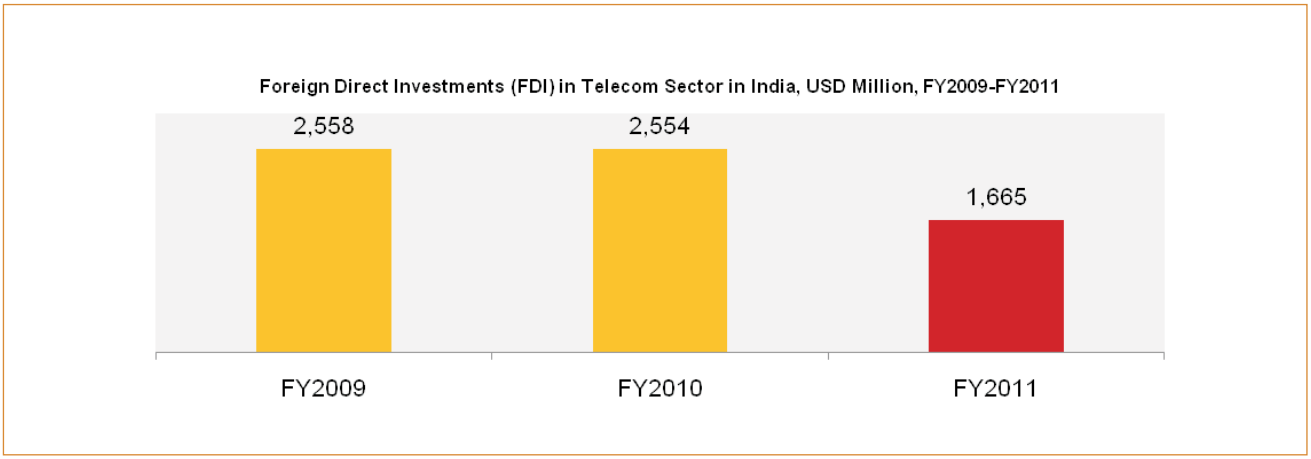
Further, operators granted licenses in 2008 have been slow in rolling out their networks. Many new 2G operators have not started operations in many circles and even in the circles that they have rolled out services, their expansion has been slow.

Moreover, FDI into the sector is in decline. FDI in Telecom sector in India was USD ~1.7 billion in FY2011, down by almost 35% compared with USD ~2.6 billion in FY2010.

[20] Connections per 100 population

[21] Source: Telecom Regulatory Authority of India (TRAI)

Chart IX: Slowing Foreign Direct Investment (FDI) in the Indian Telecom Sector



Source: Department of Telecom (DoT) Government of India. Department of Industrial Policy & Promotion Government of India.

The slow pace of investments by operators is also reflected in low tenancy ratios, slowdown in growth of telecom tower companies and the decreasing size of the Indian telecom infrastructure market.

Tenancy ratios of towers companies are low relative to the potential given the number of players. Among large players in the telecom tower space, only Viom Networks (a joint venture between Tata Teleservices Ltd. and Quippo) currently has a tenancy ratio of more than two. Indus Towers (a 3-way joint venture between Bharti Airtel, Vodafone, and Idea Cellular), American Towers, Bharti Infratel, Reliance Infratel, and GTL have tenancy ratios of less than two at 1.83, 1.8, 1.73, 1.6, and 1.4 respectively [22].

The pace of rollout of towers has also declined significantly. In 2008, the year-on-year growth rate was over 60% (albeit from a low base). In contrast, the year-on-year growth rate was only 5% in 2010 [23]. Considering the massive need for towers for rural and 3G / BWA expansion, this represents an almost halting of the network rollout machinery. Even industry leader Indus Towers, which currently has ~100,000 towers, has indicated an addition of only ~5,000 towers on an annual basis, representing a growth rate of ~5% [24].

Lastly, telecom infrastructure company revenues have declined significantly in the past year, indicating dampening of demand for network rollouts from operators. The revenues of players in the wireless infrastructure segment declined by ~24% from Rs. ~24,000 crores in FY2010 to Rs. ~18,600 crores in Fy2011 . The market size of the broadband infrastructure segment also more than halved from Rs. ~2,200 crores in FY2010 to Rs. ~940 crores in Fy2011 [25]. The slowdown in demand was exacerbated by the strict security policy of the government [26].

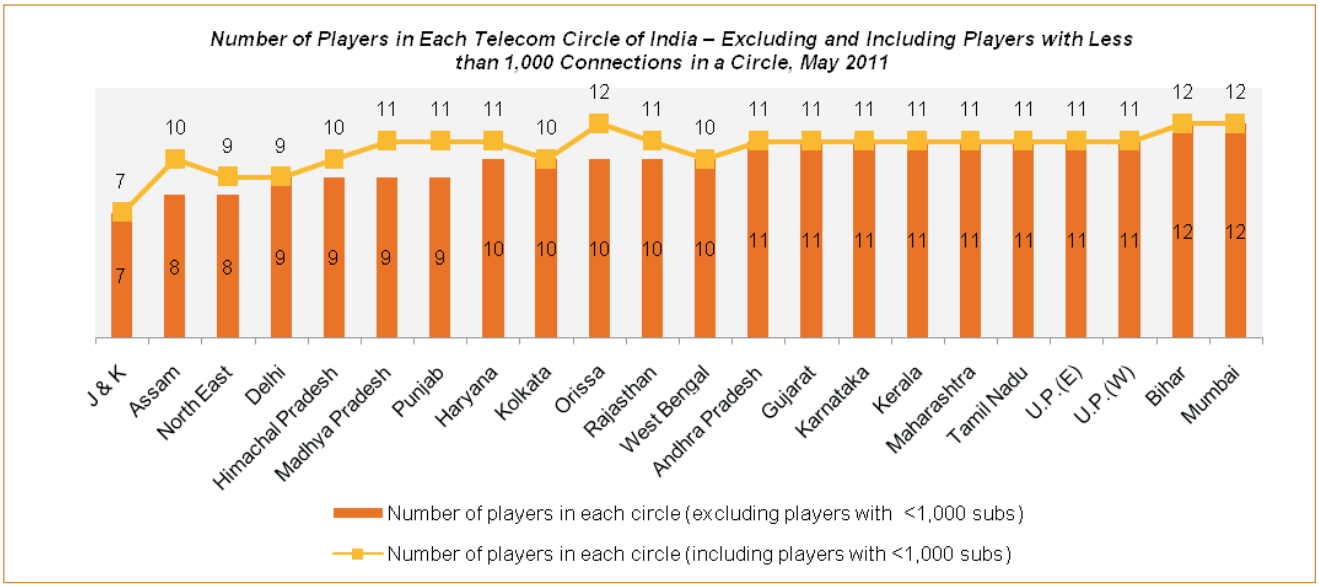
This paradox - slowdown in investments when the industry needs to make massive rollouts - can be attributed to a great extent to the poor and deteriorating financial performance of companies in the Indian cellular mobile services sector.

[22] Source: Bharti Airtel Annual Report FY2011. Voice & Data, "Towers: Standing Tall", June 2011. Company web-sites and press releases.
[23] Tele.net.in, "Strategic Shift: Focus moves from tower build-out to tenancy ratio", February 2011
[24] Tele.net.in, "Strategic Shift: Focus moves from tower build-out to tenancy ratio", February 2011. Bharti Airtel Annual Report FY2011.
[25] http://www.moneycontrol.com/news/business/telecom-infra-industry-plunges-252fy11_560086.html
[26] Http://www.moneycontrol.com/news/business/telecom-infra-industry-plunges-252fy11_560086.html

4. Deterioration of Key Operating Metrics

Simultaneous issue of licenses to multiple players in 2008 has resulted in increased competition in the Indian mobile market. At the end of May-2011, on an average, 10 players were operational in each of the 22 circles of the country, with Mumbai and Bihar having a staggering 12 players and a further eight circles having 11 players each.

Chart X: Hyper-competition across various Circles (License Areas) in India



Source: TRAI.

Comparison of the Indian market with a broad spectrum of other countries- both developed and developing - reveals the extent of hyper-competition prevalent in India. Only a handful of countries around the world have more than four players (see appendix A).

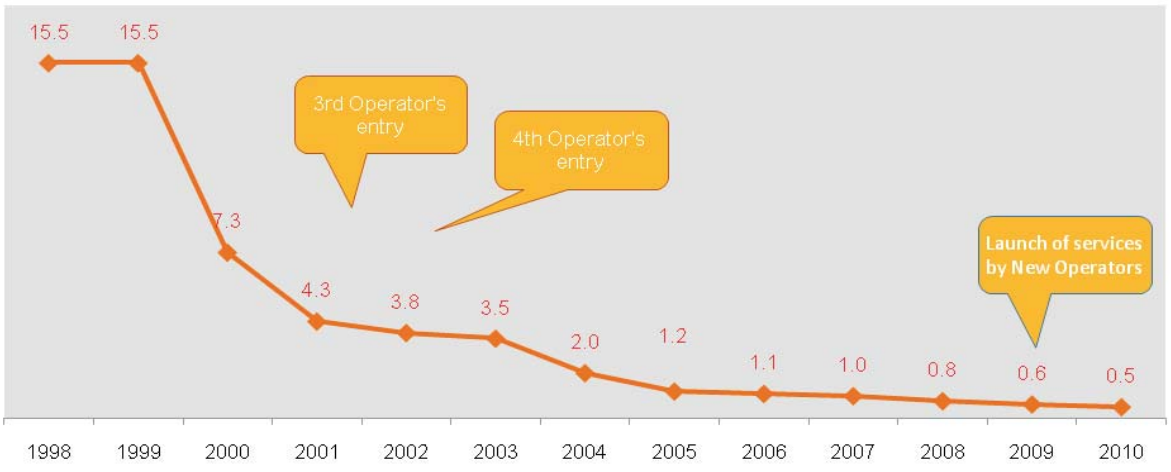
This scenario of hyper-competition has unfavourably impacted the operating parameters of the industry. The exponential increase of mobile connections has been accompanied by decreasing average revenue per minute, stagnating minutes of use per subscriber, and declining average revenue per user. Mobile services revenues have also started to stagnate and have not kept pace with the growth of mobile connections. Further, increasing complexity of operations due to rural rollouts has exerted pressure on operating expenses.

Thus, operators are being hit at both revenue and cost levels, adversely impacting their margins significantly.

4.1 Decreasing Average Revenue per Minute

After the introduction of new operators from the year 2000 onwards, tariffs (price per minute charged for an outgoing call) have declined phenomenally from INR ~15.5 per minute in 1999 to INR ~0.5 per minute in 2010. It should be noted in the year 2007 as well, tariffs in India were among the lowest in the world and the rates have reduced further by half since then. Rates had stabilized at INR 0.8 per minute by 2008 before the new round of license allocation was undertaken.

Chart XI: Significant Reduction in Call Tariffs: Average Revenue Per Minute 1998-2010



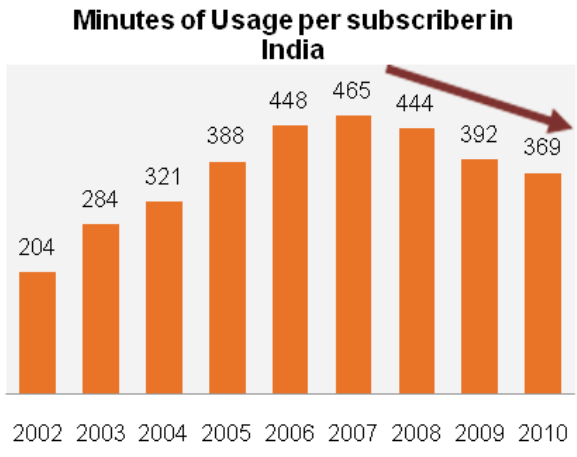
Source: TRAI.

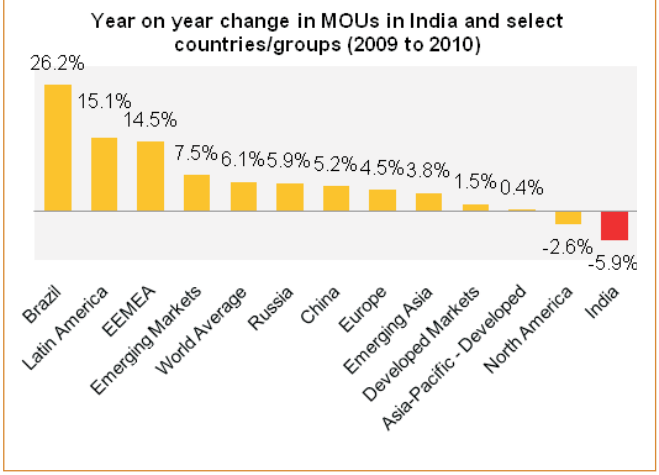
Current call tariffs in India are still among the lowest in the world (refer Appendix B). However, in light of the poor financial performance of operators (discussed in detail later), these tariffs may not be sustainable for too long.

4.2 Declining Minutes of Use

As is evident from chart on left-hand-side below, MoUs have been falling over the last 3 years. For instance, in India in 2010, MoUs declined by around 6% as compared with 2009, whereas the rest of the world (except North America) exhibited stable or growing MoUs (see chart on right-hand-side below). India's BRIC peers (Brazil, Russia, and China) also showed strong increases in MoUs. In fact, as compared with the peak of 465 minutes in 2007, MoUs as at the end of 2010 were more than 20% less at 369 minutes. This indicates that the usage of incremental connections is quite low and not compensated by increase in usage of existing connections.

Chart XII: Significant reduction in Minutes of Usage (MoU) [27]





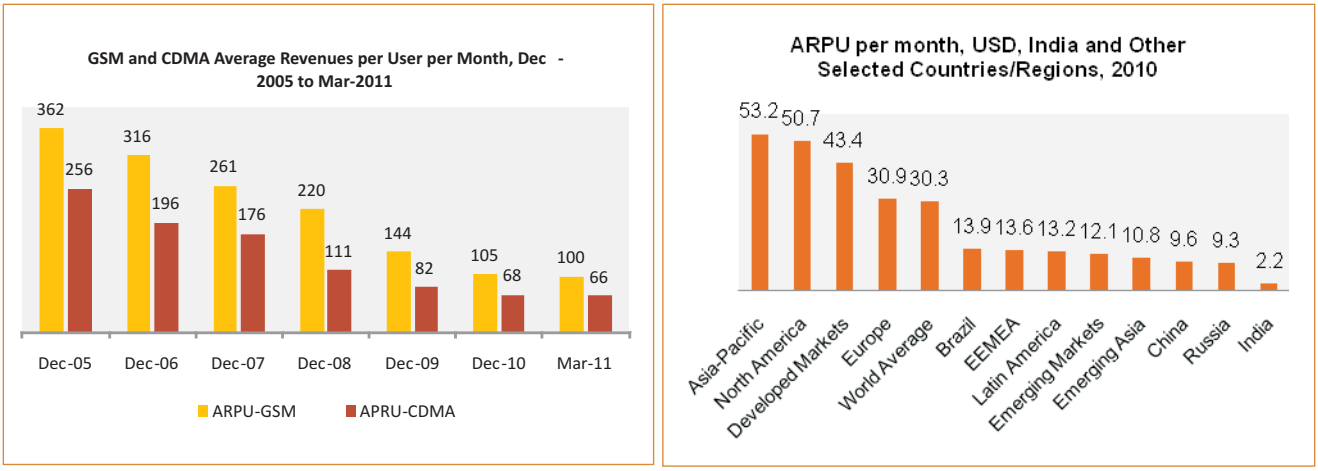
Source: Global Wireless Matrix 1Q11, Bank of America Merrill Lynch, April 2011.

[27] EEMEA: Eastern Europe, Middle East and Africa

4.3 Decrease in ARPU

The Indian mobile market has witnessed ARPUs declining at an alarming rate. This is happening as a result of aggressive fall in revenue per minute combined with reducing minutes of usage. Industry-wide ARPUs have dropped from as high as INR 362 per GSM subscriber per month in 2005 to INR 100 per GSM subscriber per month in 2011 (see chart on left-hand-side below). Globally also, India had one of the lowest ARPUs such that an Indian mobile subscriber generated less than one-third of revenues per month as compared with a subscriber in other BRIC nations or emerging markets in Asia. Further, on an average, developed markets have more than ten times the ARPU per month as that in India.

Chart XIII: Average Revenue per Subscriber per Month, 2005-2011 and ARPU per month comparison with other selected countries

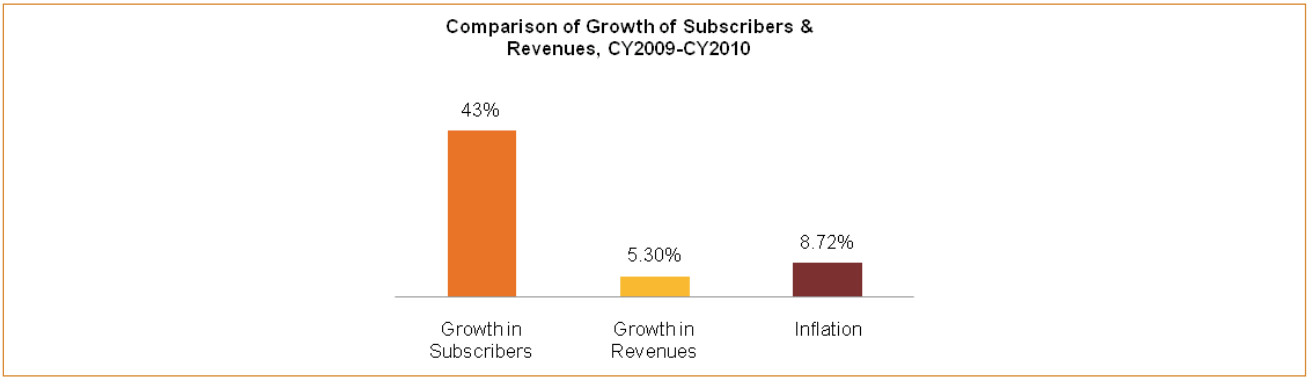


Source: TRAI performance reports. Global Wireless Matrix 1Q11, Bank of America Merrill Lynch, April 2011. PwC Analysis.

4.4 Stagnating Revenues

The net result of the trends discussed above is that the astonishing growth in the number of connections is not being translated into a similar growth in the overall revenues of the mobile market players. From the chart below, we can observe that although India added nearly 230 million new connections in 2010, increase of almost 43% as compared with the previous year, gross telecom sector revenues grew by only ~5% in nominal terms.

Chart XIV: : Stagnation of Sector Revenues



Source: TRAI. PwC Analysis.

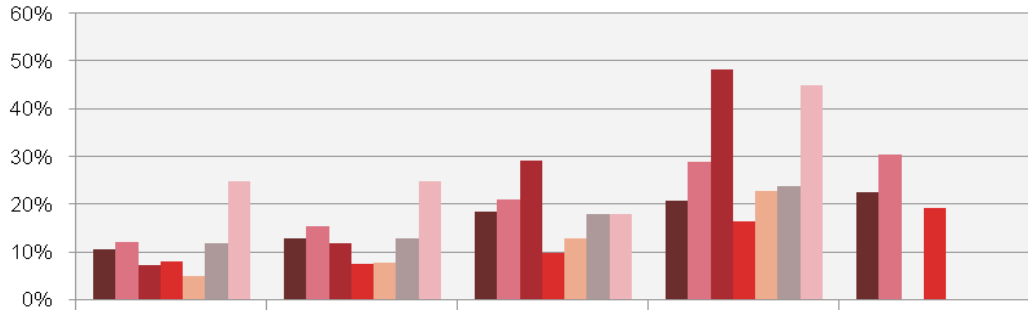
4.5 Increasing Operating Expenses

Mobile operators currently face the challenge of not only stagnating revenues but also increasing operating expenses. Operators, have undertaken a number of initiatives like infrastructure sharing, outsourcing and increasing asset productivity, yet operational challenges remain.

4.5.1 Network Expenses

The network expenses of operators are increasing due to the overall high inflationary environment along with their network expansion activities. For instance, in FY2007, network expenses as percentage of revenue for Airtel and Idea Cellular were ~11% and ~12%% respectively. However, by FY2011, they had shot up more than two-fold to ~23% and ~31% respectively.

Chart XV: : Rising Network Operating Expenses as % of Revenue for Selected Indian Mobile Operators



	FY2007	FY2008	FY2009	FY2010	FY2011
Bharti Airtel	11%	13%	19%	21%	23%
Idea Cellular	12%	16%	21%	29%	31%
Reliance Communications	7%	12%	29%	48%	
TTML	8%	8%	10%	17%	19%
TTSL	5%	8%	13%	23%	
Vodafone	12%	13%	18%	24%	
Aircel	25%	25%	18%	45%	

Source: Annual Filings of Operators with the Registrar of Companies (Extracted in July 2011). Capitaline. PwC Analysis.

4.5.2 License Fees, Spectrum Fees, and other Regulatory Charges

The Indian mobile industry is burdened by multiple duties and levies, both at the central as well as the state level. Central levies include annual license fees including Universal Service Obligation (USO) fees, annual spectrum usage fees, and service tax. Over and above these levies, various states of India also apply additional taxes/duties such as Octroi, VAT, stamp duty, and levies on towers.

Chart XVI: : Regulatory Levies in India and Selected Asian Countries

Regulatory Charges (as % of revenues)	India	China	Malaysia	Sri Lanka	Pakistan
License Fees	6% to 10%	Nil	0.5%	0.3% of Turnover + 1% of capital invested	0.5% + 0.5% R&D
Spectrum Fees	3% to 8%	~0.5%	Nil	~1.1% to turnover	Cost recovery
USOF	5% of license fees (part of licence fees)	Nil	1%	Nil	1.5%
Service Tax	10.3%	3%	5%	Telecom Levy	GST
Total	**19% to 28%**	3 to 3.5%	6.5%	1.3% turnover+ 1% invested capital + Telecom Levy	2.5% + GST+ Cost Recovery

Source: TRAI. DoT

As evident from the table above, regulatory charges in India, including license and spectrum fees, are on the higher side compared with other countries. Central levies themselves are around 19%-28% of Adjusted Gross Revenues (AGR) of operators. In contrast, telecom players in other developing countries such as China, Malaysia, Sri Lanka and Pakistan pay only ~3%-7% of revenues as regulatory fees/levies. Additionally, the industry is also subjected to State Levies such as Octroi duty on Capital Goods.

Recent Regulatory Expenses

Although recent well-intended and important regulatory initiatives regarding MNP [28], UCC[29], stricter EMF[30] compliance and Lawful Interception have provided flexibility and convenience to consumers and the Government, the burden of setting up the entire infrastructure and supporting the operations is being borne by the mobile operators.

Operators face additional expenses for verifying subscribers and maintaining associated records as there is currently no single citizen ID that can make the process smooth. Moreover, government recently imposed nearly Rs. 500 crores of penalties on mobile operators for discrepancies in CAFs (customer acquisition forms) related to subscriber verifications. This high burden of fees/levies/duties/penalties on mobile industry players has also contributed to the deterioration of profitability.

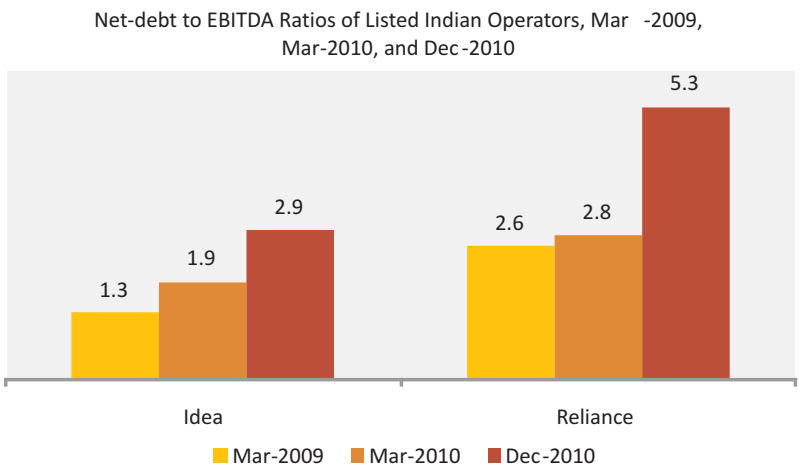
[28]Mobile Number Portability
[29]Unsolicited Commercial Communication
[30]Electro Magnetic Field

5. Deterioration of Key Leverage and Financial Metrics

5.1 Rising Levels of Indebtedness

Mobile operators have been forced to take up large amounts of debt to pay for significant investments required for rolling out the network in rural areas, paying for the 3G/BWA licenses, and rolling out 3G/BWA network. This has resulted in their debt ratios rising significantly. For instance, the Net Debt to EBITDA ratios of Idea Cellular and Reliance Communications have increased manifold from 1.3 and 2.6 in FY2009 to 2.9 and 5.3 respectively as at the end of 2010.

Chart XVII: : Net-debt to EBITDA Ratios of Listed Indian Operators, March 2009 - December 2010



Source: TRAI. CRISIL.

This high indebtedness is likely to lead to slower expansion of 2G networks in rural areas as well as slower upgrades in urban areas, and delayed rollout of 3G across India.

5.2 Decreasing Net Profit Margins

Deterioration of operating parameters due to hyper-competition and interest payments associated with high levels of indebtedness have severely impacted the net profit margins of operators. A major contributing factor to declining PAT (Profit After Tax) margins is the high cost of debt. Interest rates are high in India and have been trending up over the recent past. Since telecom has not been granted the status of an infrastructure industry, operators cannot avail themselves to debt at favourable rates of interest available to other infrastructure players such as roads and ports.

The chart below clearly indicates that the PAT margins of almost all operators have deteriorated over the past few years and in fact, a majority of them exhibit significant losses.

Chart XVIII: : Declining PAT Margins* of Operators

	FY2007	FY2008	FY2009	FY2010	FY2011
Vodafone	17%	11%	0%	-3%	0.01%*
Idea Cellular	11%	16%	10%	9%	5%
Aircel	35%	9%	-8%	-66%	
Reliance	21%	18%	30%	4%	-6%
Bharti	23%	24%	23%	26%	20%
TTSL	-46%	-35%	-33%	-21%	
TTML	-22%	-7%	-8%	-14%	2%
Shyam Sistema	-53%	-158%	-620%	-616%	
HFCL Infotel	-42%	-57%	-96%	-11%	-93%
Uninor**				-286%	
MTNL	14%	12%		-68%	-76%
BSNL	20%	8%	2%	-6%	

Note: * PAT margins calculated as Profit After Tax divided by Net Sales. **Uninor results are for operating profit margin for CY2010; it commenced operations in CY2009-Q4 and had revenues of INR ~25 million and operating loss of INR ~7,962 million in Cy2009. FY2011 values for Bharti and Reliance are for Bharti Airtel and Reliance Communications; for previous years the values include results of Bharti Hexacom and Reliance Telecom respectively as well.

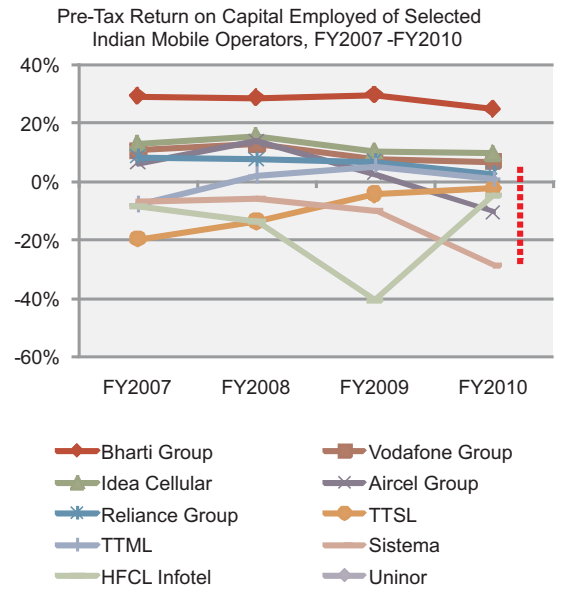
Source: Annual Filings of Operators with the Registrar of Companies (Extracted in July 2011). Capitaline. India Infoline, *Company Website, PwC Analysis.

5.3 Low Return on Capital Employed

Return on Capital Employed (RoCE), although often neglected, is an extremely important measure for determining the financial health of companies. RoCE indicates whether the firm is generating enough returns to compensate for its Weighted Average Cost of Capital (WACC).

The following chart indicates that the RoCE of mobile operators has declined significantly. Moreover, the values are extremely low, even negative in many cases, and indicate that the firms are not able to earn returns that would help them recover their investments.

Chart XIX: : Low & decreasing Pre-tax return on Capital employed of Operators



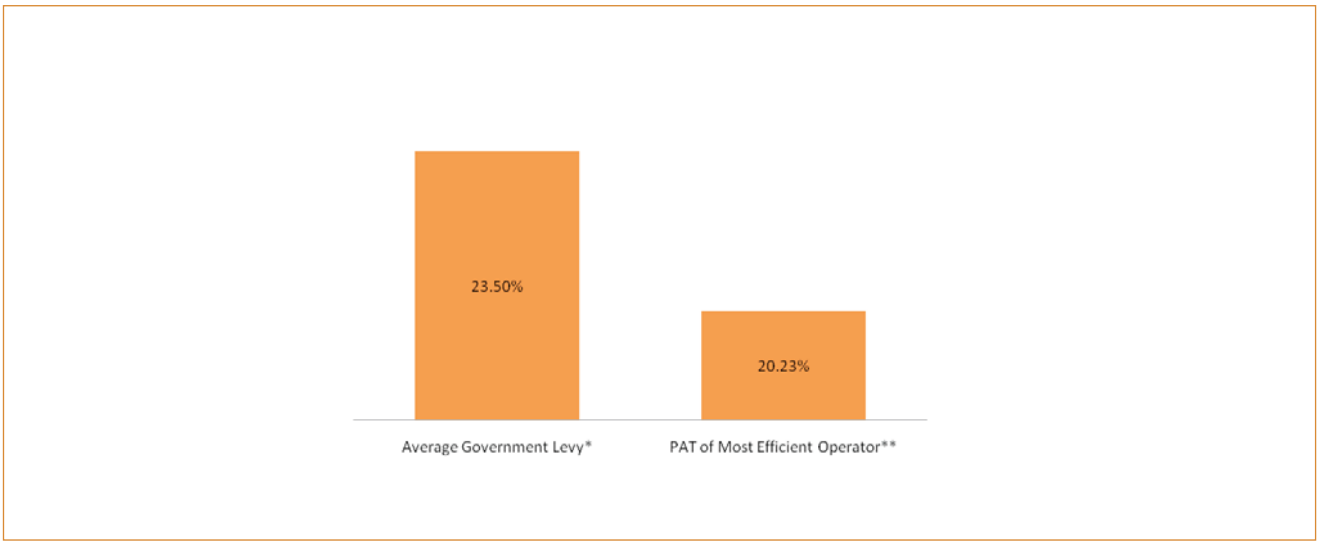
	FY2007	FY2008	FY2009	FY2010	FY2011
Vodafone	11%	13%	8%	7%	
Idea Cellular	13%	16%	10%	10%	9%
Aircel	6%	14%	3%	-11%	
Reliance	8%	8%	7%	2%	
Bharti	29%	29%	30%	25%	19%
TTSL	-20%	-14%	-4%	-2%	
TTML	-8%	2%	5%	1%	-93%
Shyam Sistema	-7%	-6%	-10%	-29%	
HFCL Infotel	-8%	-14%	-41%	-5%	-5%
Uninor*				-113%	
MTNL	9%	7%	3%	0%	

Note: * Pre-tax RoCE has been calculated by dividing Profit before Interest and Tax by the Capital Employed. The figure does not reflect the INR 1 lakh crore investment on 3G/BWA made by all operators. **Uninor's pre-tax RoCE values calculated using reported operating profit and cumulative fixed asset investments as well as cumulative depreciation / amortization / impairment losses (excluding net current assets) are -27% and -113% for CY2009 and CY2010 respectively. FY2011 values for Bharti are for Bharti Airtel; for previous years the values include results of Bharti Hexacom as well.

Source: Annual Filings of Operators with the Registrar of Companies (Extracted in July 2011). Capitaline. India Infoline, Company Website, PwC Analysis.

Such low values of RoCE and PAT margin coupled with high debt levels do not augur well for the industry. It is highly likely that many operators will curtail their expansion plans as they will not be confident about recovering their investments in light of the currently poor performance. Interestingly, in the current revenue share regime, the government levy's of 19% - 28% is more than the PAT margin of the most efficient operator in the industry.

Chart XX: : Comparing average levy to net profit of most efficient operator



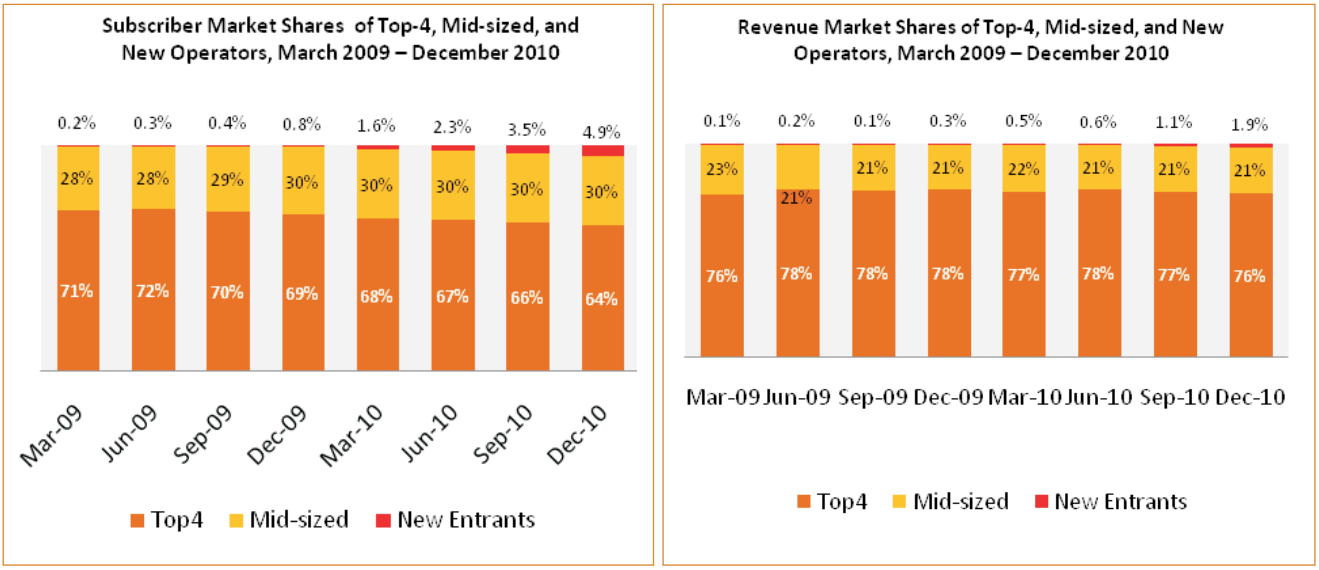
Note: * As a percentage of the AGRs of the operators for FY 2010-2011** 20.23% for Airtel Stand-alone for FY2010-2011

Source: PwC Analysis

6. Up-hill task for new operators

New operators also face a high degree of challenge due to slower market growth. Significant market expansion is still needed for new operators to ramp up their market presence. Currently, they have only ~5% market share (in terms of connections) and ~2% revenue share on a combined basis.

Chart XXI: Low Subscriber and Revenue Market Shares o f New Operators[31]



Source: TRAI. CRISIL.

Further, their ARPUs are only around one-third of the ARPUs of incumbent operators. In December 2010, the average ARPU of new entrants was INR 55 (USD ~1.2)[32], which was only around one-third of the ARPU of top 4 players (INR 165) and around half that of mid-sized players (INR 97)[33]. Moreover, most of the players are facing significant amount of losses. Many players have not been able to roll-out their services in many of the circles for which they won licenses, as depicted by the chart below.

Chart XXII: Slow Pace of Capital Investments by New Operators

	Uninor	Sistema	Loop	Videocon	S-Tel	Etisalat/Allianz
Licenses	22	22	22	21	6	15
Not Launched (<1,000 subs)	9	7	20	5	1	0
Launched	13	15	2	16	5	15

Note: Updated as at the end of June 2011.
Source: DoT, TRAI

Thus, new operators will continue to face an uphill task due to market structure issues. It is imperative that industry dynamics evolve to ensure that growth for players is sustainable.

[31]Top 4 players refer to Airtel, Vodafone, Idea Cellular, Reliance Communications; Mid-sized players include BSNL, MTNL, TTSL, TTML, and Aircel; New entrants include Uninor, MTS/Sistema, Stel, and Videocon
[32]1 USD = INR 45
[33]Source: TRAI. CRISIL

7. Need for proactive action

Over the past decade, the Government has taken a number of steps aimed at boosting the sector. The initiatives have primarily centred around four key pillars- availability, affordability of services, contribution to national exchequer, and sustainability of industry players:

- Making voice and data/internet services available to every citizen of the country, especially in rural and remote areas, has been a key objective. As discussed earlier, this has numerous benefits in terms of improved access to information, increased economic activity, and the ability to offer services such as healthcare and education. This also provides a tremendous fillip to the economy. Moreover, in a country such as India with low per capita income levels, affordability of services is a key aspect that cannot be overemphasized.
- In terms of contribution to the national exchequer, the telecom industry has the potential to generate significant amounts of revenue for the government both on an on-going basis (through license / spectrum fees, corporate taxes, customs duty on imported equipment, sales taxes, etc.) and one-off basis (e.g. through auction of licenses/spectrum).
- Holistic sector growth, affordability of services and contribution to GDP growth are all dependent on the financial sustainability of industry players. Industry players will continue to invest and plough back money into the sector and thereby grow the sector only if the players are healthy and are generating returns sufficient to compensate for their cost of capital. If many industry players do not have healthy financials, tariffs will eventually start increasing, and network expansion activities would also slow down.

Although broadly, Government policies have been directed at the goal of achieving overall sector objectives, some of the policies may no longer be in alignment due to changing market dynamics that have arisen with the passage of time.

This is reflected in the poor and deteriorating fundamentals of Indian mobile operators, as discussed in detail earlier. In an attempt to focus on improving returns from existing operations, industry players could be forced to raise tariffs [34]. For instance, many mobile operators in India have recently announced an increase in pre-paid tariffs. Although the call rates are still quite low, if industry fundamentals stay poor, further tariff hikes could be on the cards. Moreover, this is also likely to have an adverse impact on future expansion activities of operators, as witnessed through recent slowing down of FDI[35] and capital expenditure in the sector, discussed earlier.If not addressed in time, this would hurt consumer interests as well as threaten the achievement of Government objectives of availability, affordability of services and sustainability.

Keeping in mind the contribution of telecom sector to the nation in employment generation and its strong inter-linkages with other sectors of the economy, the government needs to take a proactive approach towards policy interventions that would ensure business viability of the operators to enable continued growth of the sector. There is a pressing need to bring in policy changes such as

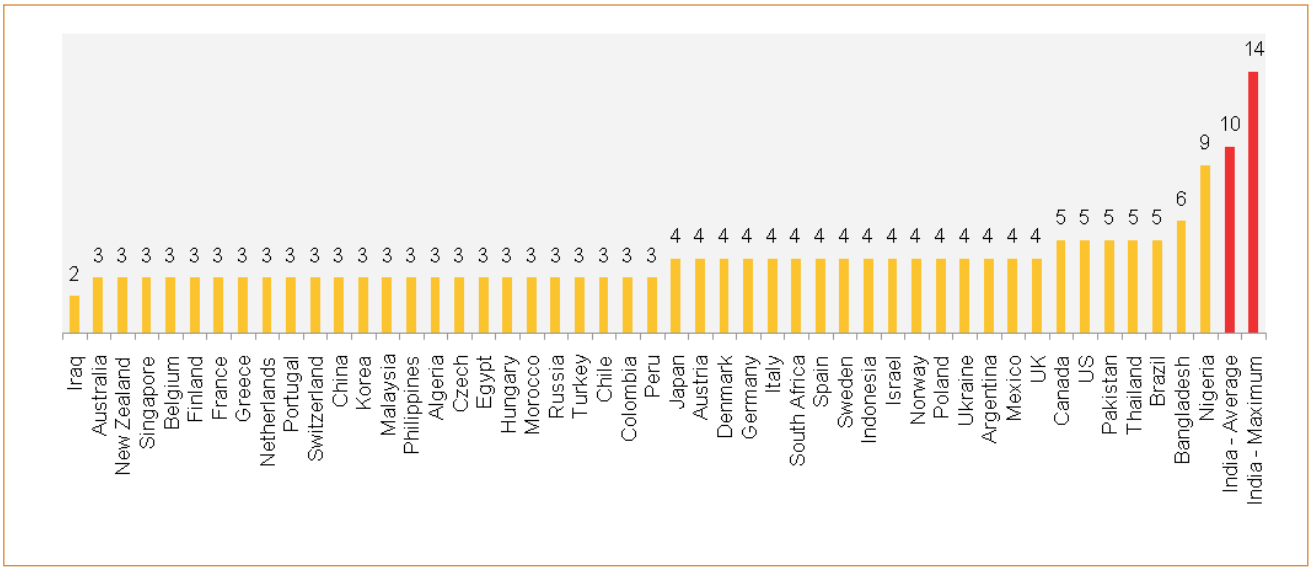
- a correction in market structure through liberal M&A norms
- rationalization in Central and State levies
- effective utilization/phasing out of USOF; which has a huge un-utilized surplus
- releasing more spectrum to operators
- pragmatic implementation of security linked compliances

The new National Telecom Policy should also aim to provide Regulatory clarity and predictability that will support the sustenance of players and encourage the much needed further investment in the sector to drive the next avenues of expansion in rural areas and mobile broadband (3G/BWA).

[34]Source: Various press releases.
[35]Foreign Direct Investment

Appendix A - Number of Mobile Players in India and the World

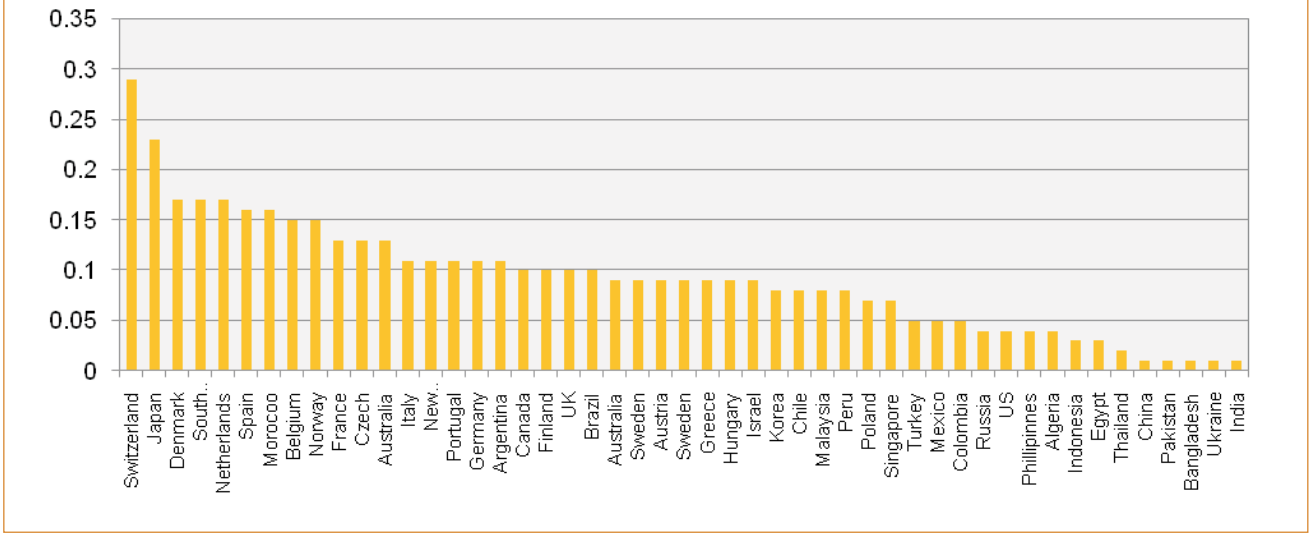
Comparison of Number of Players in India and Selected Other Countries, March 2011



Source: TRAI. Global Wireless Matrix 1Q11, Bank of America Merrill Lynch, April 2011.

Appendix B Call Tariffs in India and the World

Revenue per Minute of Mobile Calling, India and Selected Developed and Developing Countries, USD, Q4-2010



Source: TRAI. Global Wireless Matrix 1Q11, Bank of America Merrill Lynch, April 2011.

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The study has been commissioned by COAI. The data used for the study has been collected from various public sources and the audited reports available with the Registrar of Companies (RoC).