



The Bangladesh Telecoms Sector: Challenges And Opportunities

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Key themes



Bangladesh Telecoms Overview

- **Rapid Growth:** The Bangladesh Telecoms sector has seen mobile penetration growth that has exceeded all expectations.
- **A transformative impact on the economy** in terms of aggregate investment, FDI and productivity levels. Connectivity helps social cohesion
- **BD Innovator in global telecoms** such as the “ Village Phone” concept
- **Helping Bangladesh’s capital markets development:** The IPO of Grameenphone, in November 2009, with more than 100,000 shareholders
- **Greater future Investor Focus on Telco Sector:** With market expectations growing of further IPOs from other Telecoms players such as Banglalink, Robi and Teletalk, as well as potential industry consolidation, interest in the sector from investors, both locally and internationally, is set to growth further.



Key Themes

- Rapid Mobile Phone Growth Should Continue. Aggregate revenue growth for Telecoms sector as a whole likely to remain robust.
- Average Revenue Per User (ARPU) may decline further as rural mobile penetration growth dominates next phase of subscriber growth.
- Infrastructure sharing will help reduce marginal costs for a number of operators.
- But declines in ARPU should be moderated by growth of VAS and Data Services.
- Data market growth will be supported by both the introduction of 3G networks (likely H1 2011) as well as prospective further cuts in Broadband wholesale costs and intro of second submarine fibre optic cable.
- GOB support for the sector remains vital in terms of reducing SIM Tax to accelerate mobile penetration rates and also clarifying regulatory uncertainty about license renewal as rapidly as possible.



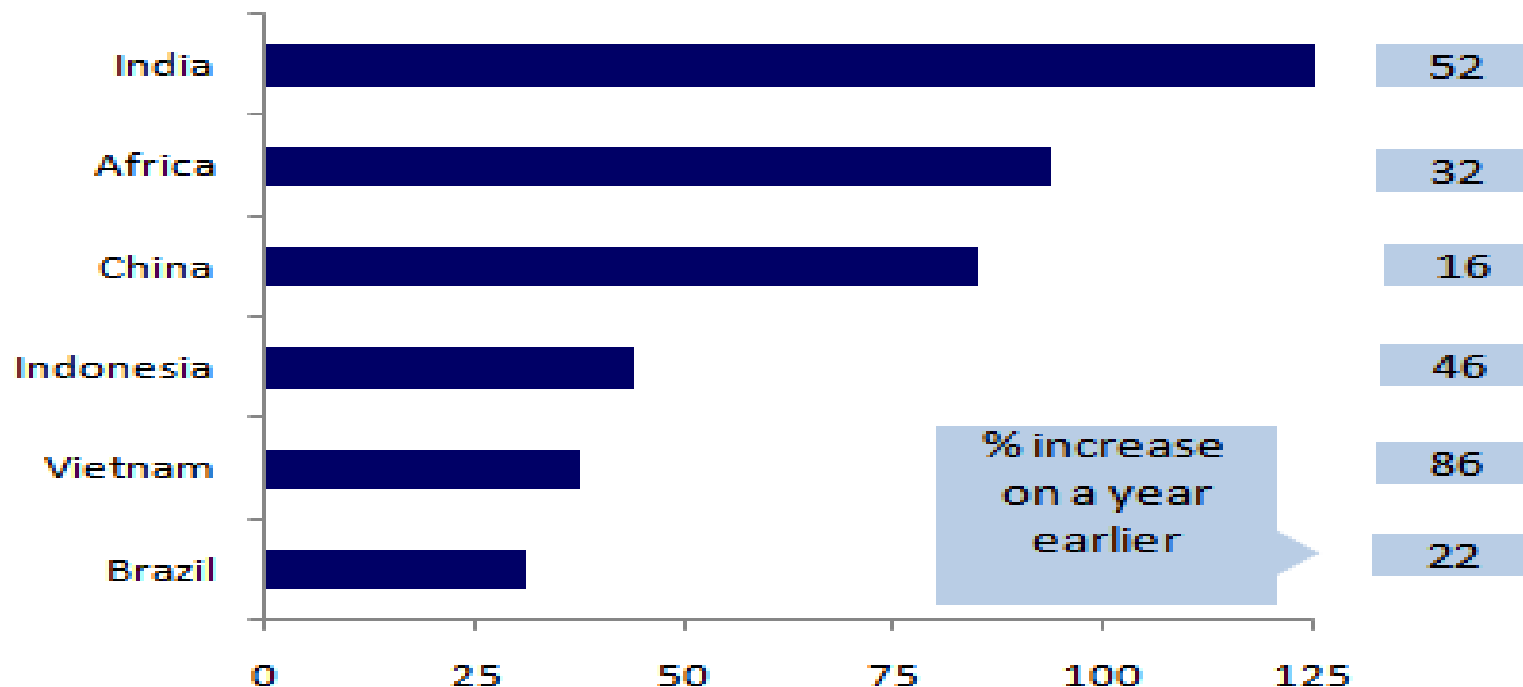
The Economic Impact of Telecoms in Bangladesh



Mobile Phones Penetrated despite “the Telecoms Trap”

- Historically, incomes restrict the ability to pay for infrastructure rollout. However, several factors came together to make mobile phones more accessible to poorer people/trigger rapid growth in past few years.

Voracious markets
New mobile phone subscriptions
Year ending March 2009, m



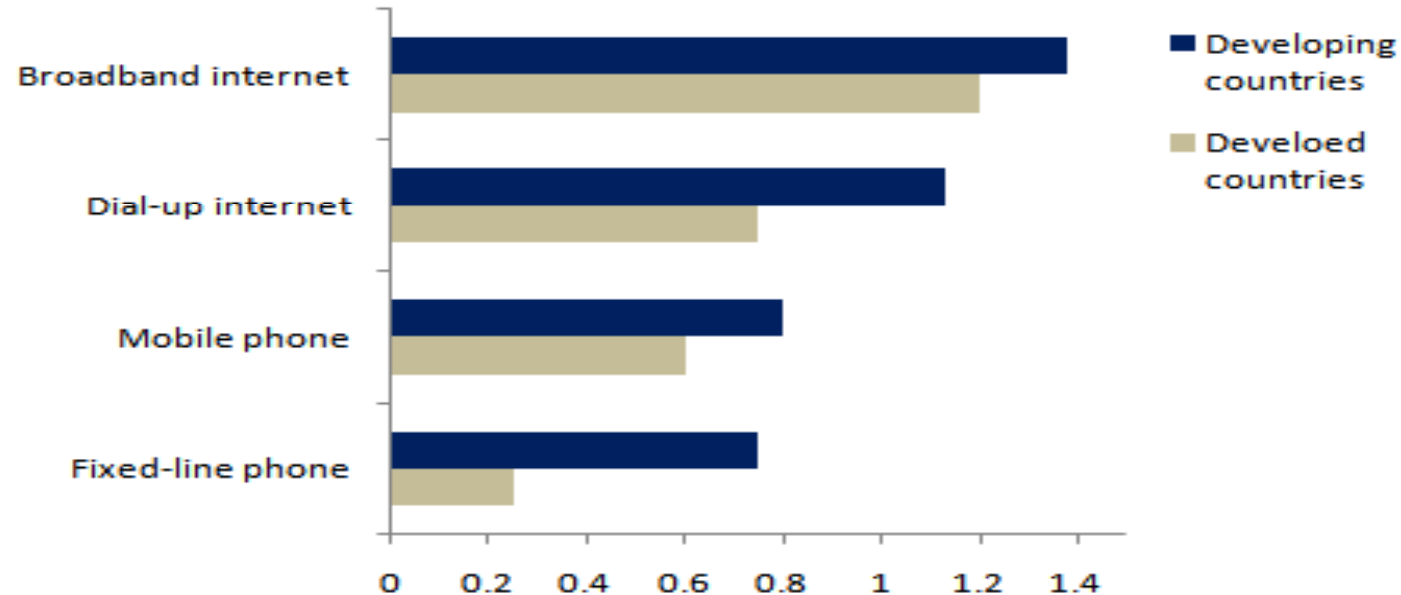
Source: Informa Telecoms & Media



Mobile Phones Boost Economic Growth

- According to the World Bank, an extra 10 mobile phones per 100 people in a typical developing country added 0.6 percentage points of growth in GDP *per capita*, and this impact is about twice as large in developing countries than in developed countries.

Growth effects of ICT, percentage points*



* Increase in GDP growth per 10-percentage-point increase in telecommunications penetration

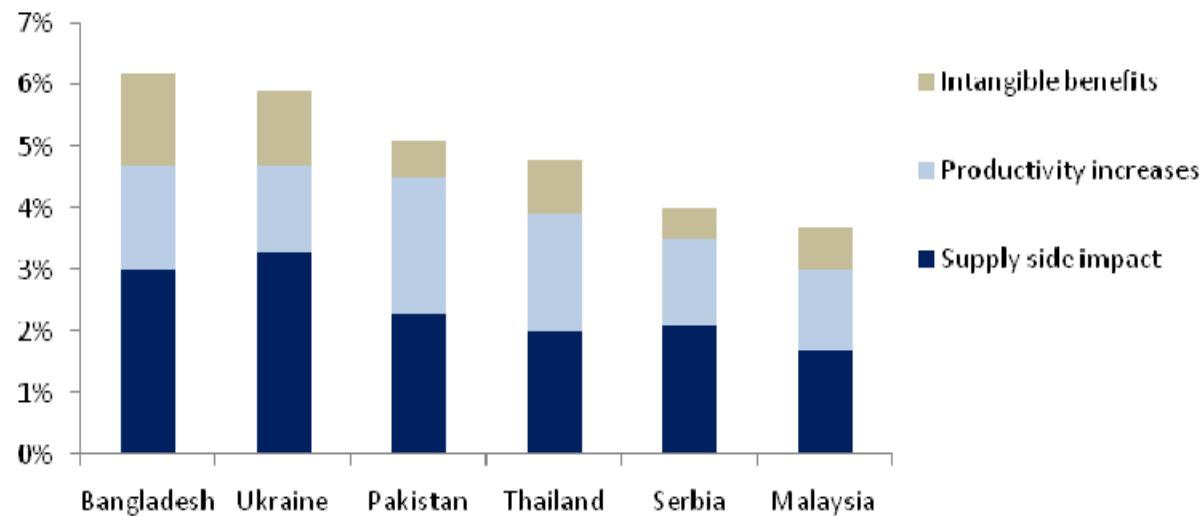
Source: World Bank; Qiang 2009



Contribution of Mobile Industry

- Access to communications
- Mobile Remittance
- Productivity
- Reduce transaction costs
- Provide opportunities for business expansion
- Encourage entrepreneurialism
- Improve the ability to search for employment
- Facilitate mobile banking

Economic impact of the mobile communications industry in 2007 as a % of total GDP, by type of impact



Source: World Bank; Qiang 2009



Employment Creation

- Deloitte estimated that in aggregate, including direct and indirect employment, more than 111,790 jobs have been created by the industry to date.
- It can be seen that employment in related industries (indirect employment) constitutes a large proportion - they act as either suppliers to the MNOs or retailers or distributors of mobile services. The largest contributors are airtime and SIM distributors and retailers making up 50% of total FTE.

Employment Impact	Number of employees (FTE)	Number of employees including multiplier
Mobile network operators	9,380	9,380 ¹²¹
Fixed operator	1,120	1,570
Network equipment suppliers	13,180	18,450
Other suppliers of capital items	4,450	6,230
Handset distributors and retailers ¹²²	10,360	14,500
Support services	3,100	3,700
Airtime and SIM distributors and retailers	39,930	55,900
CICs	950	1,320
Total FTE	82,460	111,700

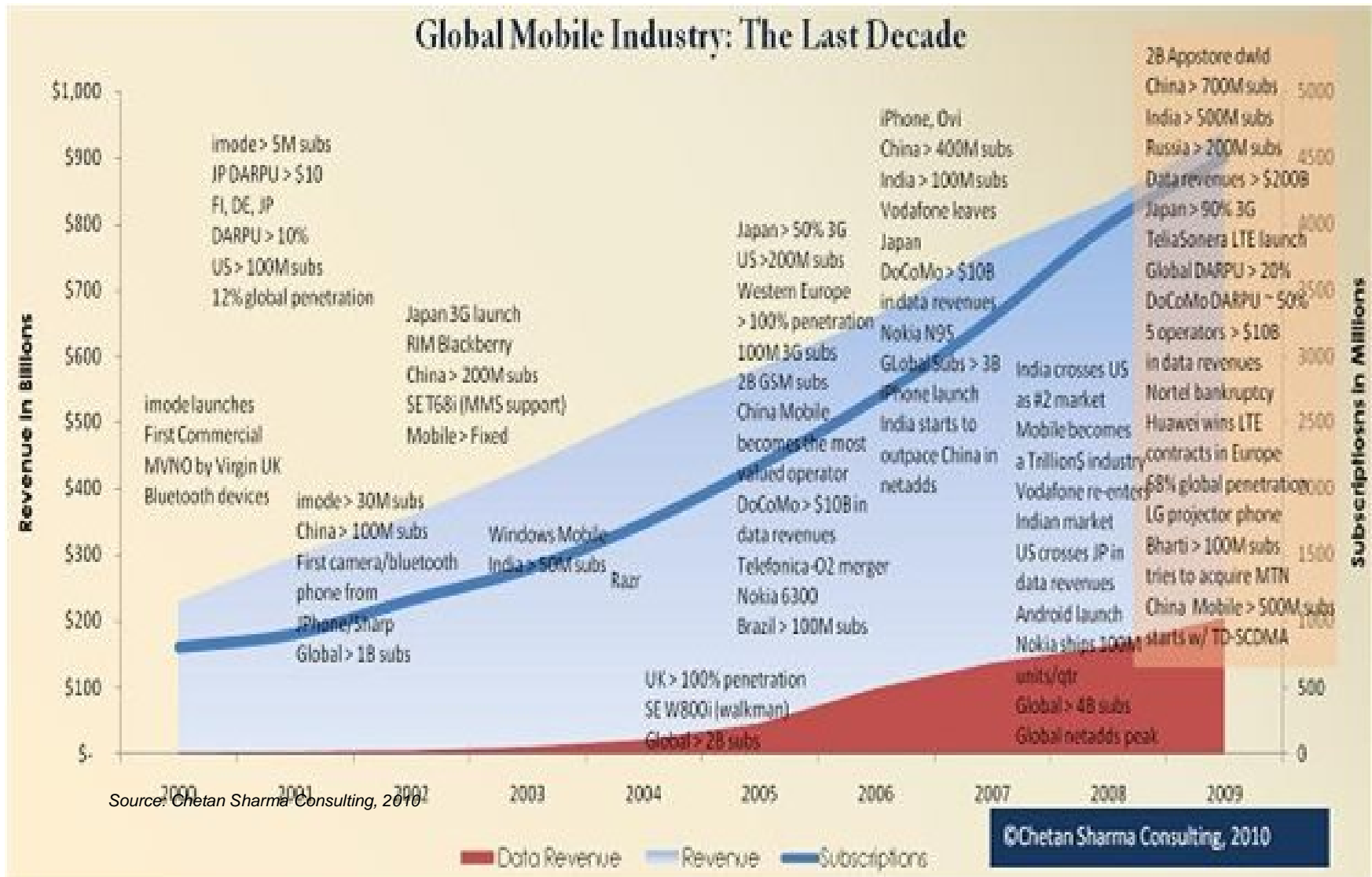
Source :Deloitte: Operator data, interviews, industry reports and Deloitte analysis on average wage rates.



Bangladesh Telecoms Sector Enjoying Rapid Growth



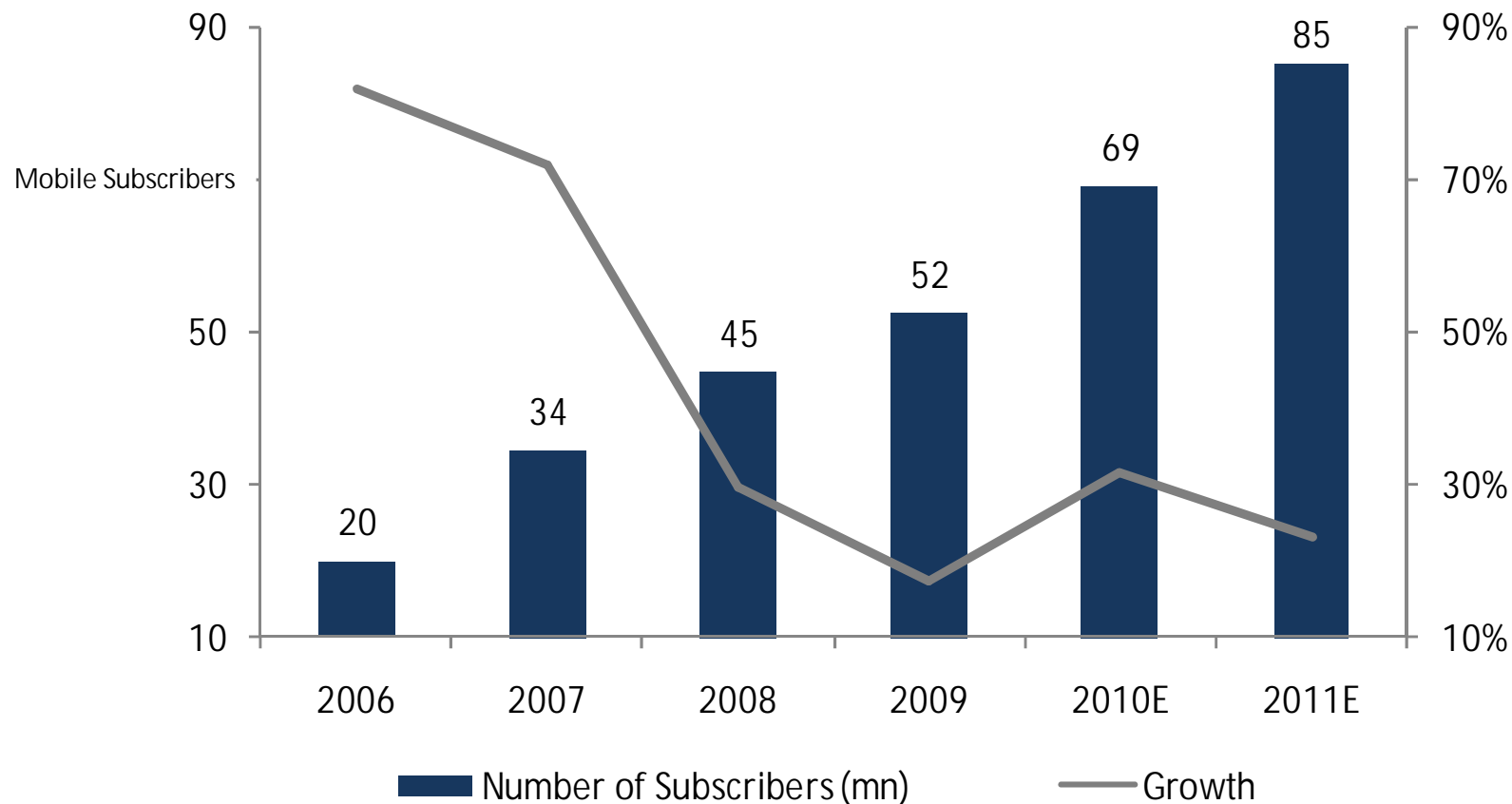
Global Mobile Industry Rapid Growth Last Decade





Bangladesh Telecoms Sector Enjoying Rapid Growth

- Annual growth rate has accelerated sharply in the first half of this year and by the end of September 2010 there were a total of 65.14 million cellular customers i.e. 38% penetration

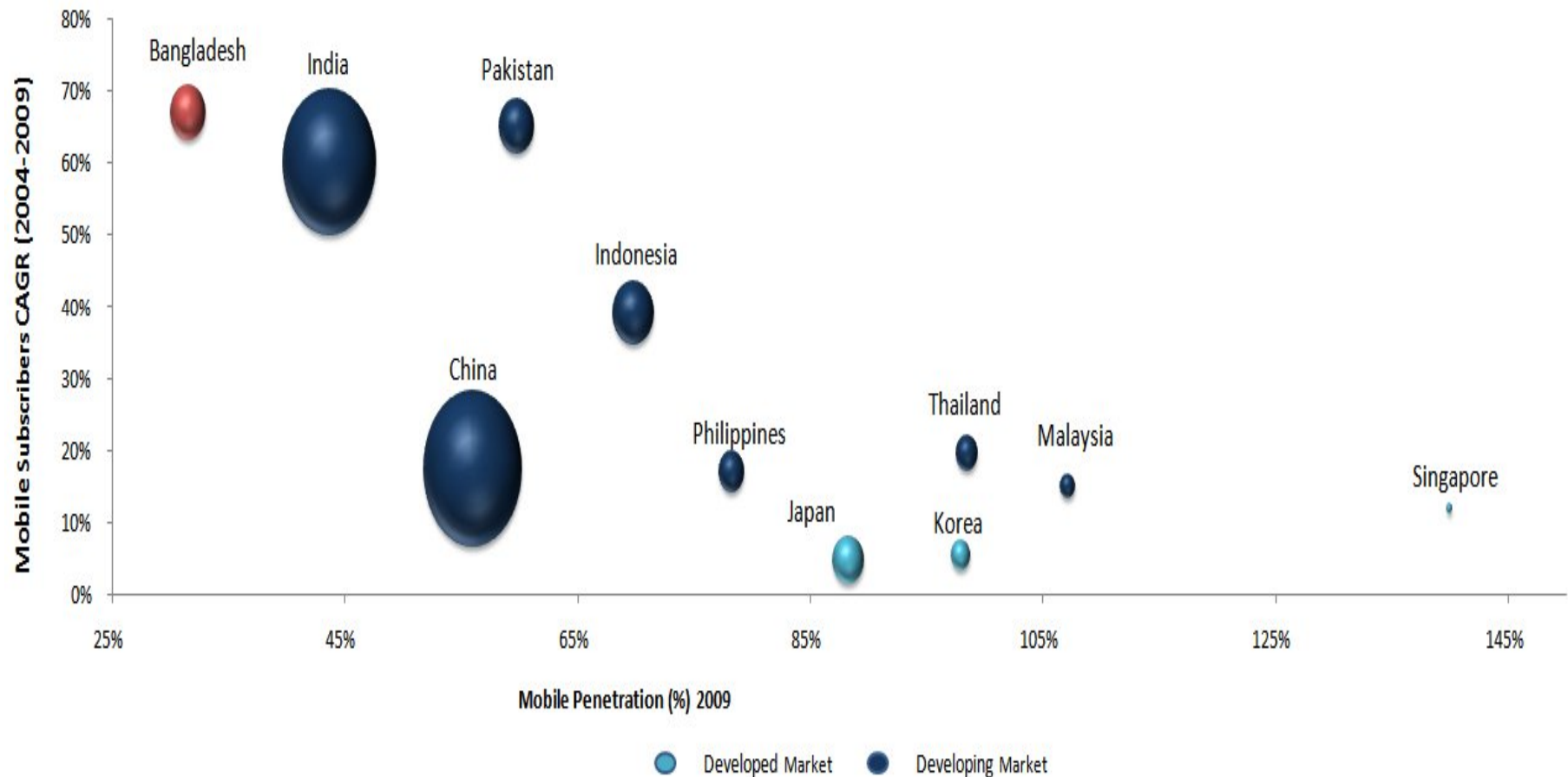


Source: AT Capital Research & BTRC



BD subscriber growth to remain one of the fastest in Asia

Mobile Penetration vs. Mobile Subscribers CAGR



Source: AT Capital Research; Note: Size of bubble denotes relative population of country.



Opportunities and Challenges



Key Opportunities

- **Expand Valued Added Services (VAS):** While the mobile VAS market has been growing, a number of initiatives still need to be undertaken to fully developing this market. The VAS contribution to revenue is upwards of 20% in emerging markets such as China, even without introduction of 3G, as compared to sub 10% in India. For Bangladesh it is key to encourage the development of a robust VAS ecosystem in areas such as Agricultural VAS, Mobile Banking, M-Health and M/E-Commerce.
- **Convergence will become more important:** If service providers build service-converged networks, then financial services, public services, and entertainment applications will be able to reach a far larger portion of the population. This is likely to have major implications for BD Telecoms companies and may lead them to invest in ISPs but also in IPTV, Video and Media and also game development as well as domestic web content.
- **Infrastructure Sharing:** One of the major new initiatives in 2010 has been infrastructure sharing agreements between GP & Banglalink and Robi & Banglalink. We expect this trend to continue partly enforced by the regulator but also as a matter of practical necessity.



Key Opportunities

- **Public Private Partnerships (PPPs)** opportunities for Telcos to partner up with the Government of Bangladesh (GoB) in service delivery across the areas of e-education, e-health and e-governance.
- **Lower Broadband Costs:** There is a strong case for GoB to substantially reduce broadband wholesale prices further to also accelerate broadband access to a broader range of the public. This might be done in conjunction with the installation of a second submarine broadband cable.
- **Digital Bangladesh:** Push to develop ITES and Outsourcing presents new business opportunities/diversification by the Telecoms companies. We have already seen such a strategy being adopted by market leader GP who have established GP IT as a separate company and one that is already the largest IT company in Bangladesh with around 300 employees.
- **Possible Tax Cuts:** The GoB might enact more Telecoms friendly regulatory or fiscal reforms such as cuts in the SIM tax to encourage faster mobile phone penetration to catalyze access to information and hence the Digital Bangladesh push.



Challenges - License Uncertainty and 3G Opportunity

- **Clarity on process and terms of Telecom license renewal** : The BTRC has yet to announce the terms on which the Telecom Licenses of the top 4 players, namely GP, Banglalink, Robi and Citycell, will be renewed when they expire in 2011.
- **3G networks are expected to significantly enhance user experience** of existing data services, with limited introduction of video and other high bandwidth services by carriers; data ARPU of 3G subscribers is expected to be initially dominated by data connectivity charges.
- **3G License uncertainty**: The expected cost and terms on which 3G licenses will be issued remains unclear

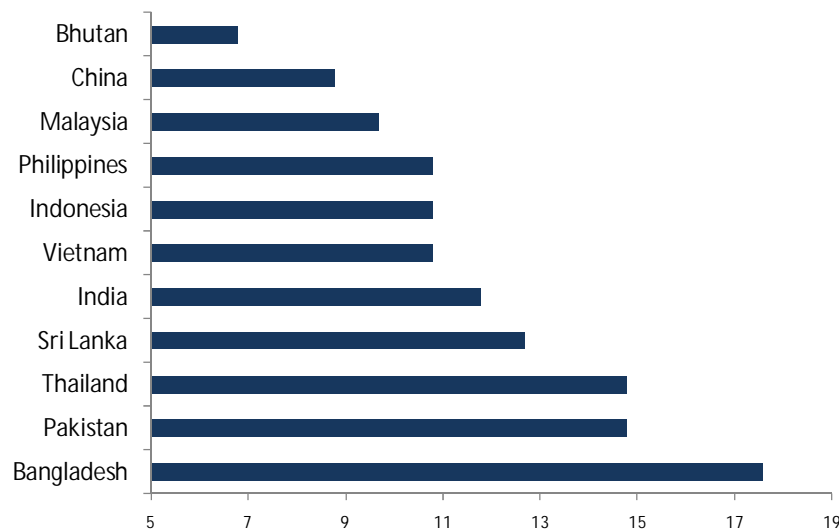
In these circumstances, it has become very difficult for mobile operators to make any long term investment. An early, fair, transparent and participatory renewal and license process on reasonable terms would promote investors' confidence and would act as an incentive for long term investment in Bangladesh.



Challenges – Taxation and Regulation

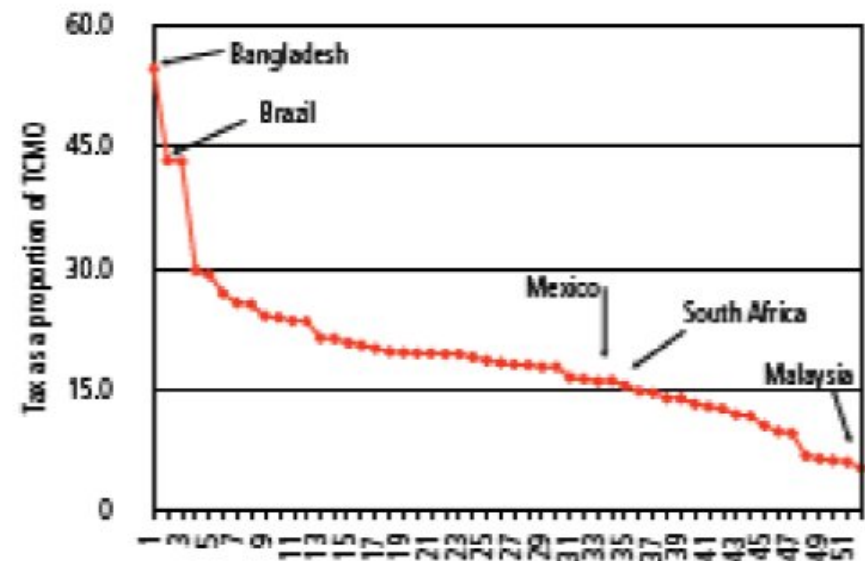
- Bangladesh mobile telecoms consumers suffer one of the highest levels of taxation
- The recent amendment to the Telecoms Act might increase the risks of arbitrary regulatory interventions.

Tax as proportion of Total cost Mobile Ownership (TCMO) (in %)



Source: "Global tax review 2006-07 by Deloitte

Tax Percentage of total cost of ownership of mobile services

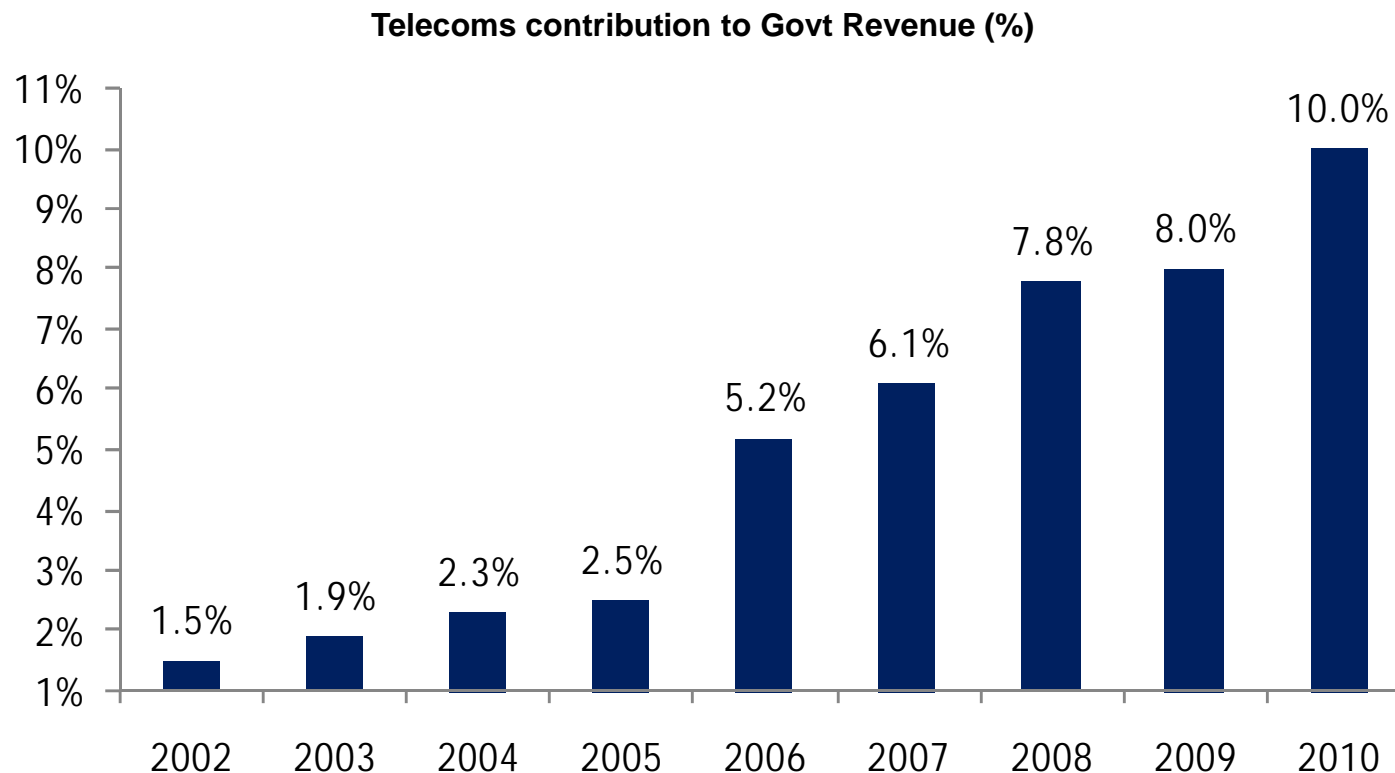


Source: Deloitte (2008), Updated by TAS



Telecoms sector major contributor of Tax Revenues

Telecoms are a major contributor to National fiscal Revenues and so it is in the interests of the Government to keep the sector expanding.

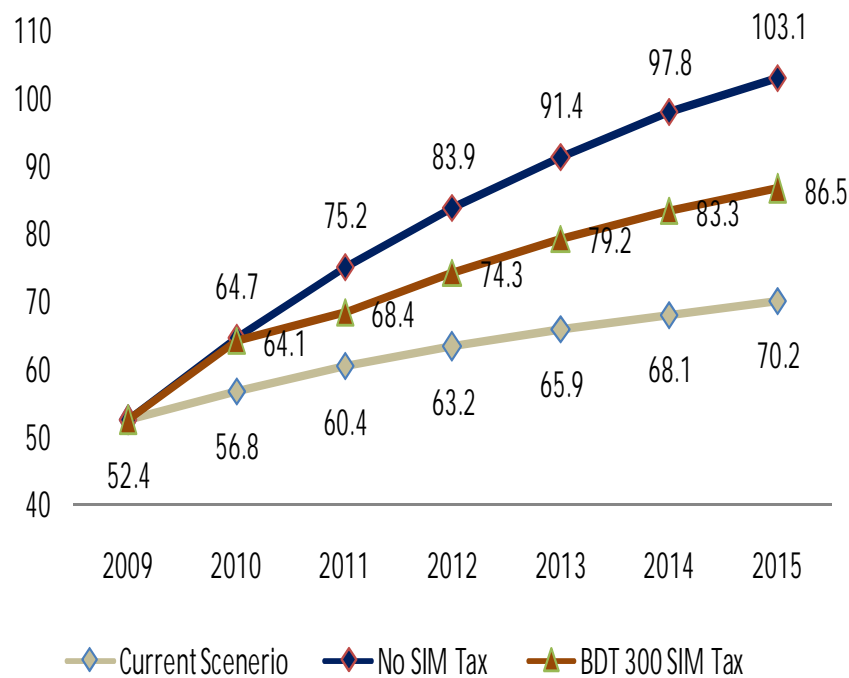


Source: AMTOB & NBR

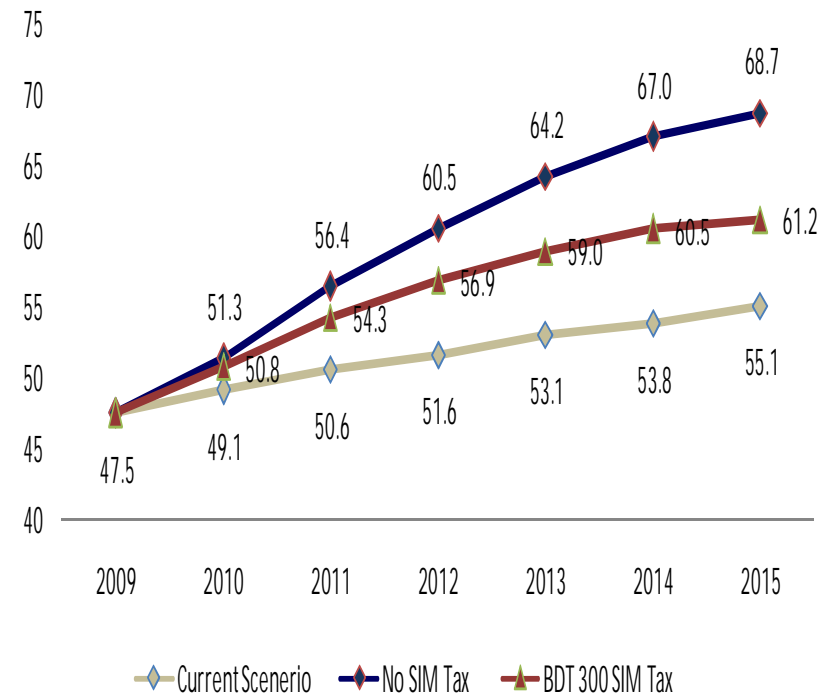


SIM Tax Limiting Subscriber Growth

Market growth Potential (mn)



Government Revenue Projection (BDT Bn)

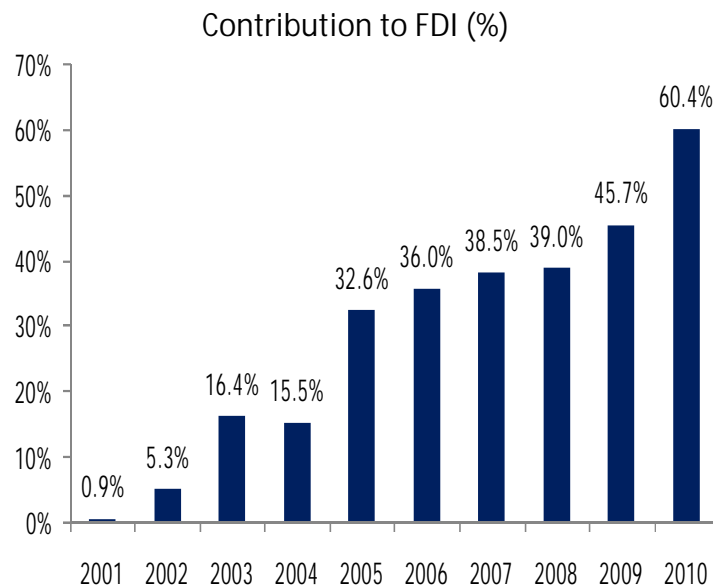


Source: AMTOB

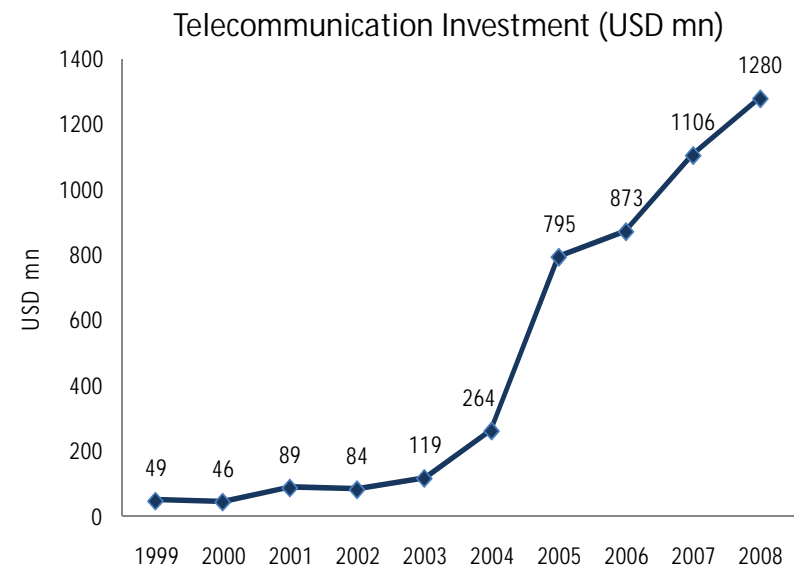


Capex Expenditure by Mobile Telcos will remain high

- With 3G and provision of data services, Mobile Telecoms sector (being largely foreign owned), will to continue to be the highest contributor to FDI .
- Investment in the sector will largely relate to significant capex expenditure required to build out networks and license acquisition costs.
- In 2008, investment amounted to around USD 1.3bn, steadily increasing over the years as network coverage was expanded across Bangladesh.



Source: Bangladesh Bank; Figure for 2010 provisional, only for 9 months



Source: AMTOB & AT Capital Research
Note: Investment in 2008 is annualized based on 3Q



Drivers of Telecoms Sector Growth



Key Drivers of Mobile Penetration Rates

- **Relative wealth** e.g. GNP per capita
- **Quality, availability, and pricing** for wire line services.
- **Innovative service offerings**
- **The intensity of competition**
- **Variations between national markets**
- **The price of a handset**
- **Acquisition price of a SIM**

Wireless Penetration of Emerging Asia (%)

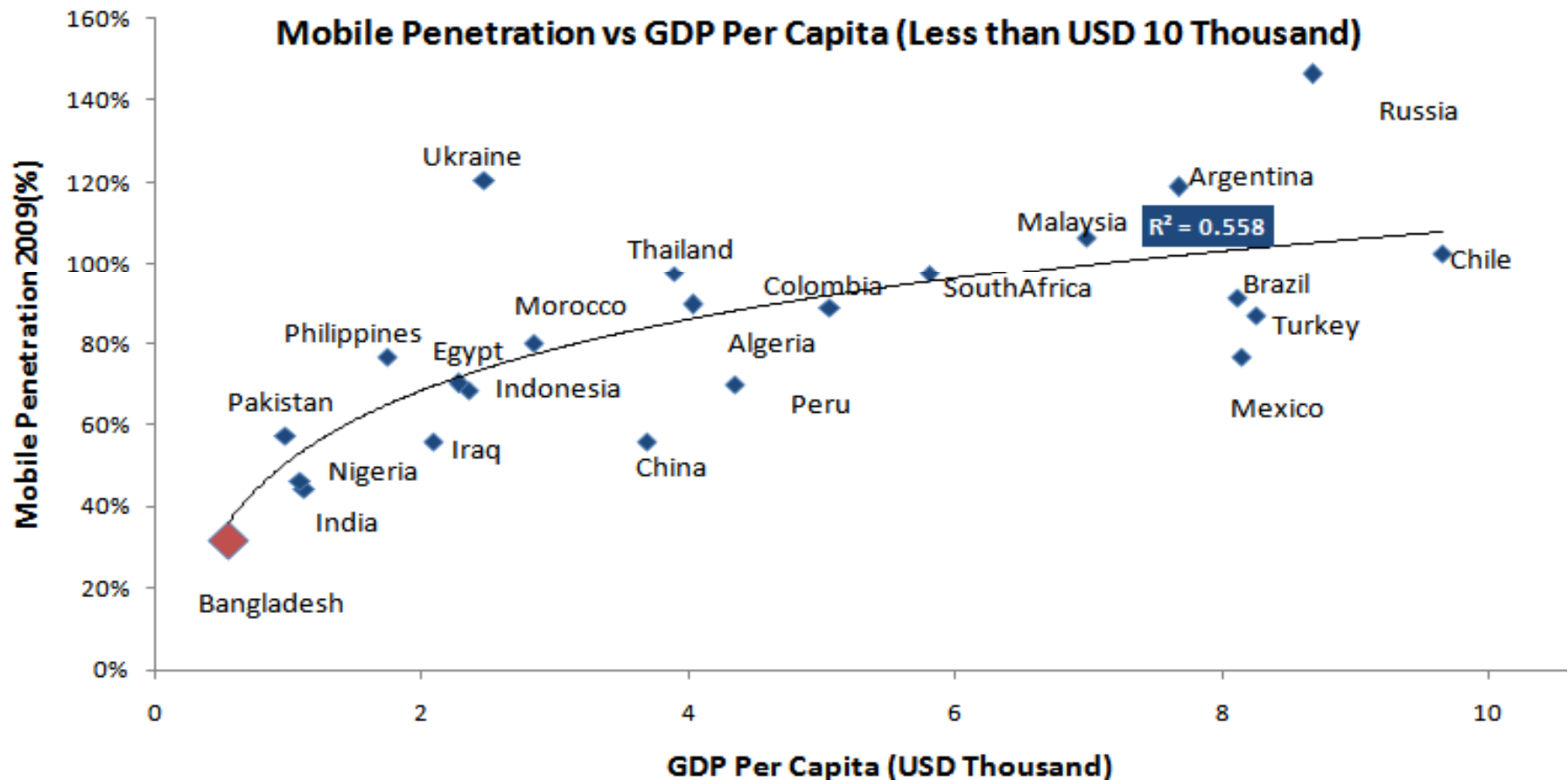
	2002	2003	2004	2005	2006	2007	2008	2009	2010E	2011E
Bangladesh			3	7	13	22	28	32	41	50
India	1	3	5	7	13	20	29	44	58	70
Pakistan			5	14	31	49	56	60	64	68
Indonesia	5	9	14	23	30	42	62	70	76	82
Thailand	28	35	42	47	62	81	93	99	102	103
Malaysia	26	44	57	75	74	87	99	106	118	124
Phillippines	19	28	39	41	49	61	73	78	81	83
Emerging Asia	10	13	17	21	27	36	44	54	63	71

Source: BofAML Global Research estimates & AT Capital Research



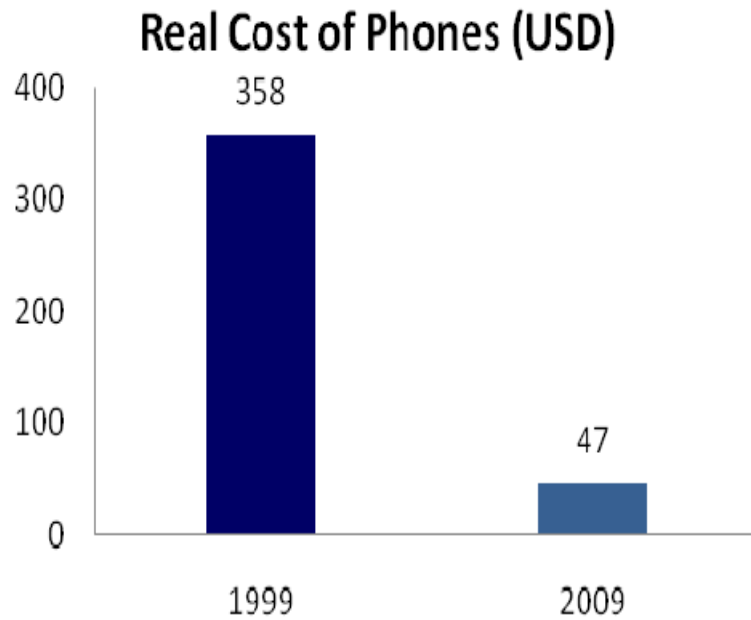
Mobile Penetration and GDP per Capita

- For lower and middle income countries with per capita income below USD 10,000 shows a positive relationship between mobile penetration & per capita with R Sq coeff of 0.56.

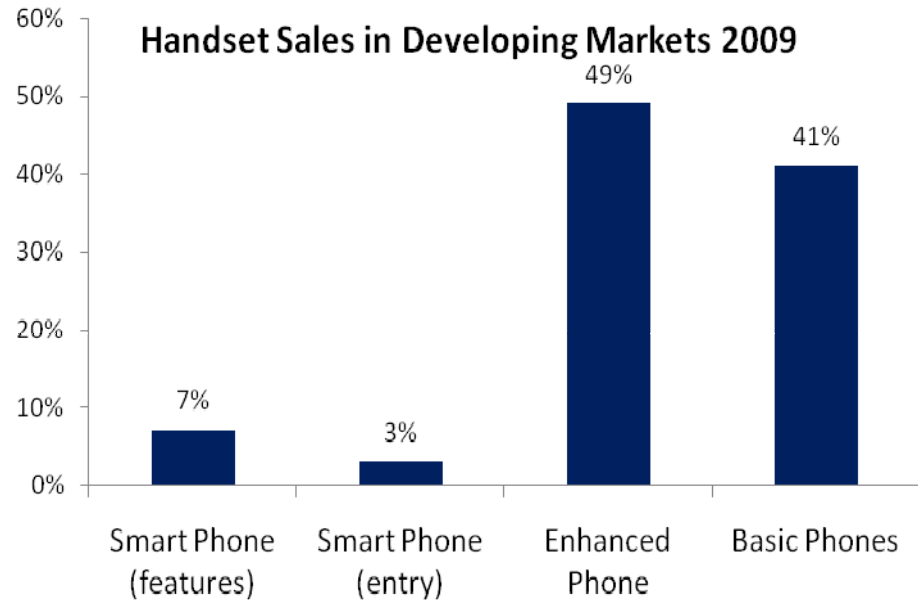


Source: AT Capital Research

Handset costs have fallen sharply



Source: Gartner

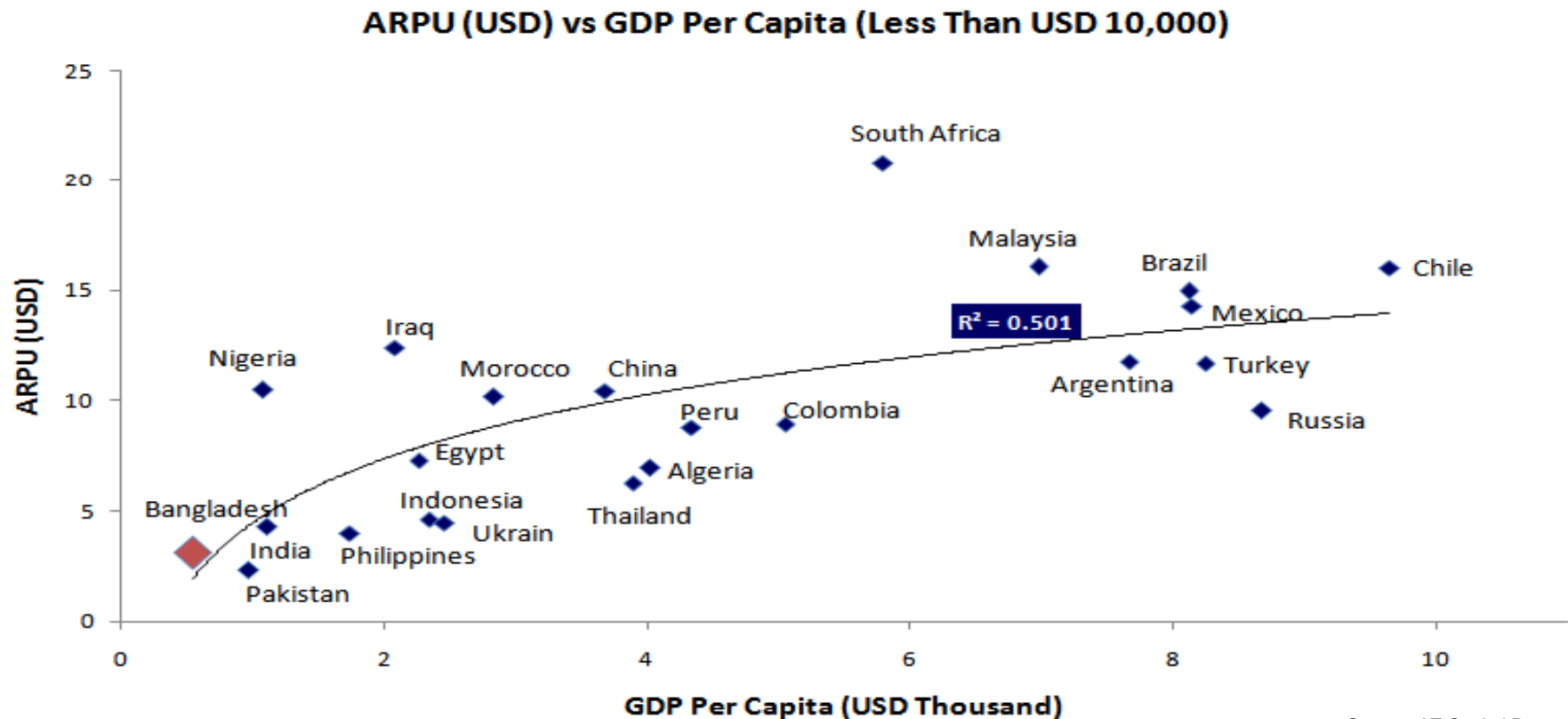


Source: Gartner



ARPU Levels Partly Driven by Per Capita Income

- Profitability of subscribers primarily depends on ARPU (Average Revenue Per Share).
- A customer with a higher ARPU generates more revenue and obviously is more valuable, all other things (churn, acquisition costs to get them, and costs to support them) being equal.
- There is a Correlation between ARPU and GDP per Capita (0.5).



Source: AT Capital Research



Data, 3G, Convergence, VAS

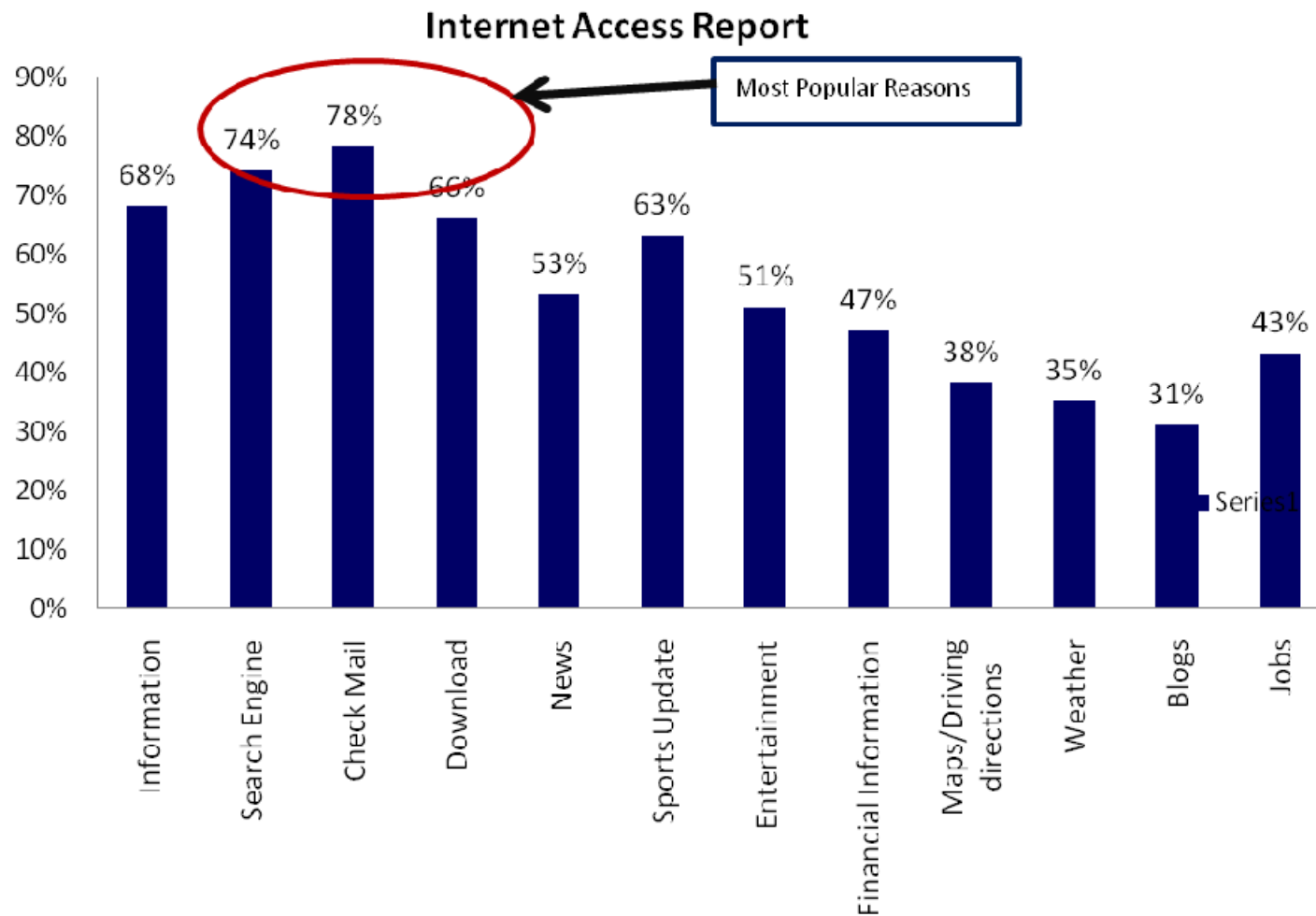


Data, 3G, Convergence

- Mobile data surpassed voice on a global basis in December 2009.
- Mobile broadband users are forecast to reach more than 3.4bn by 2015 (from 360M in 2009).
- 80% of all people accessing the internet will do so using their mobile device.
- Main drivers
 - 1) better networks in the form of 3G (and future upgrades of 4G+),
 - 2) higher processing power devices being available for mass-market prices, and
 - 3) consumers are not only consuming but also producing content at an exponential pace.
- In developing countries, voice revenues are likely to continue to expand but data will also become more important.



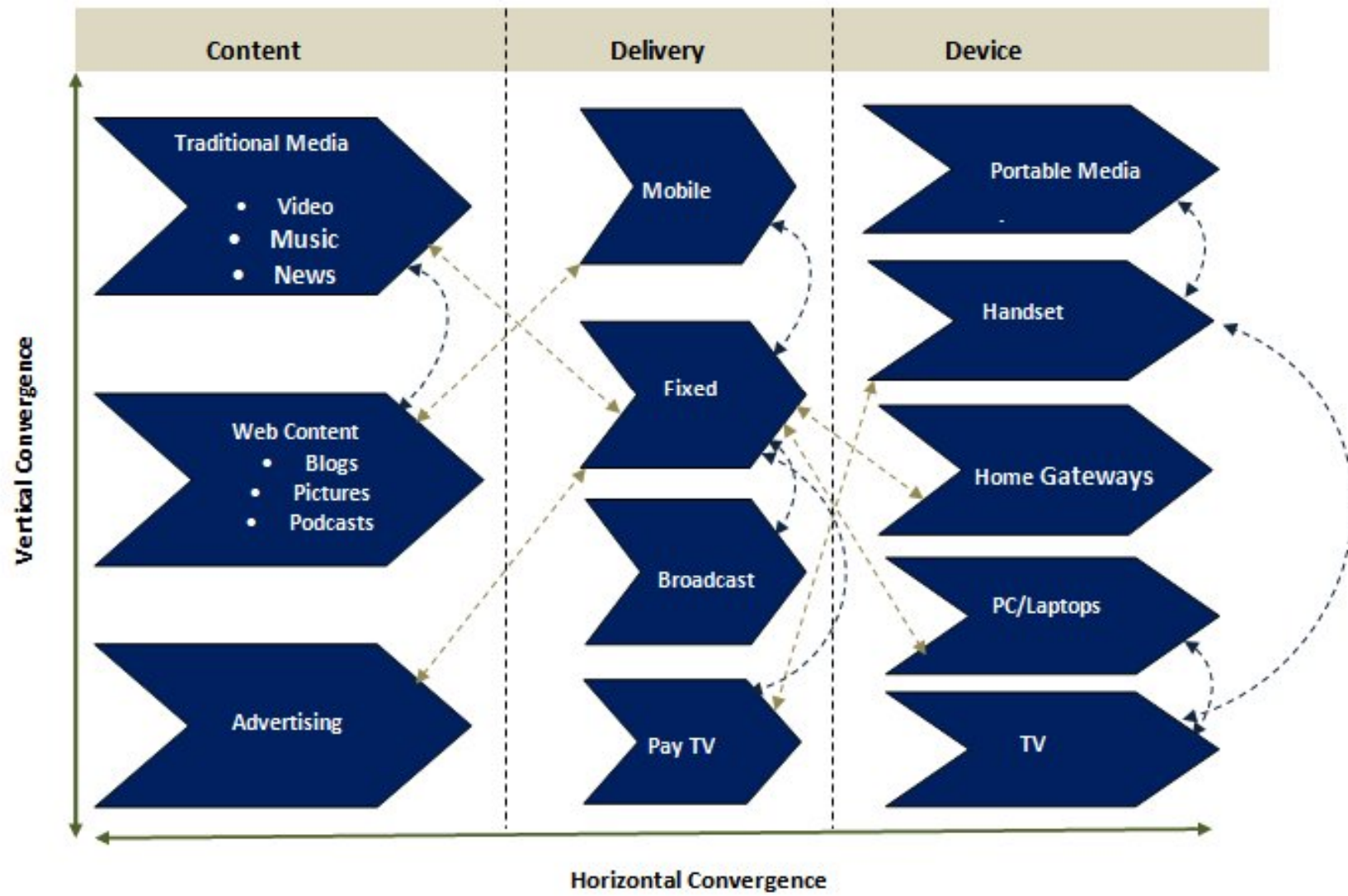
India Mobile Phone Internet Access



Source: Vital Analytics

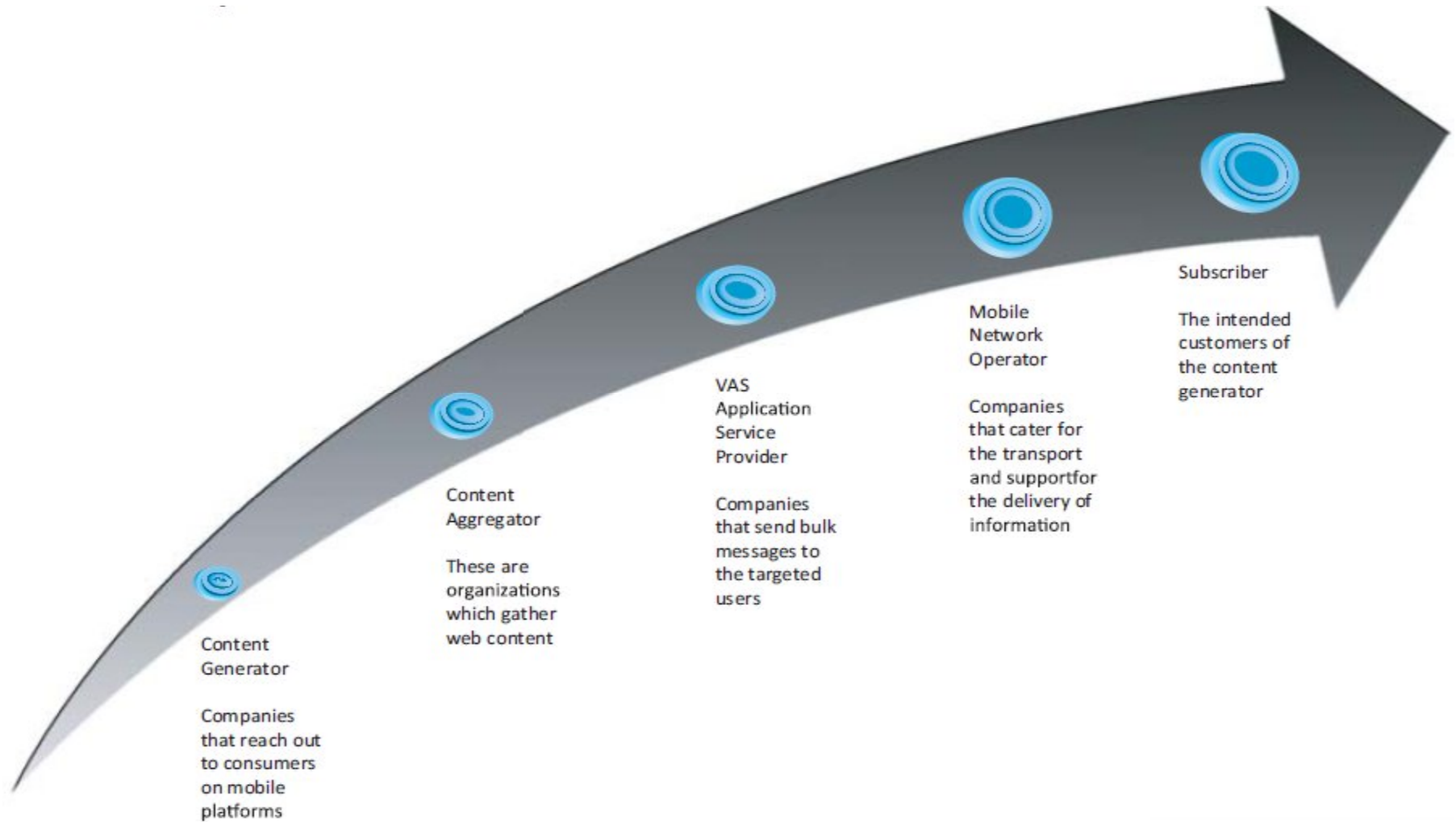


Convergence and the Telecoms Sector





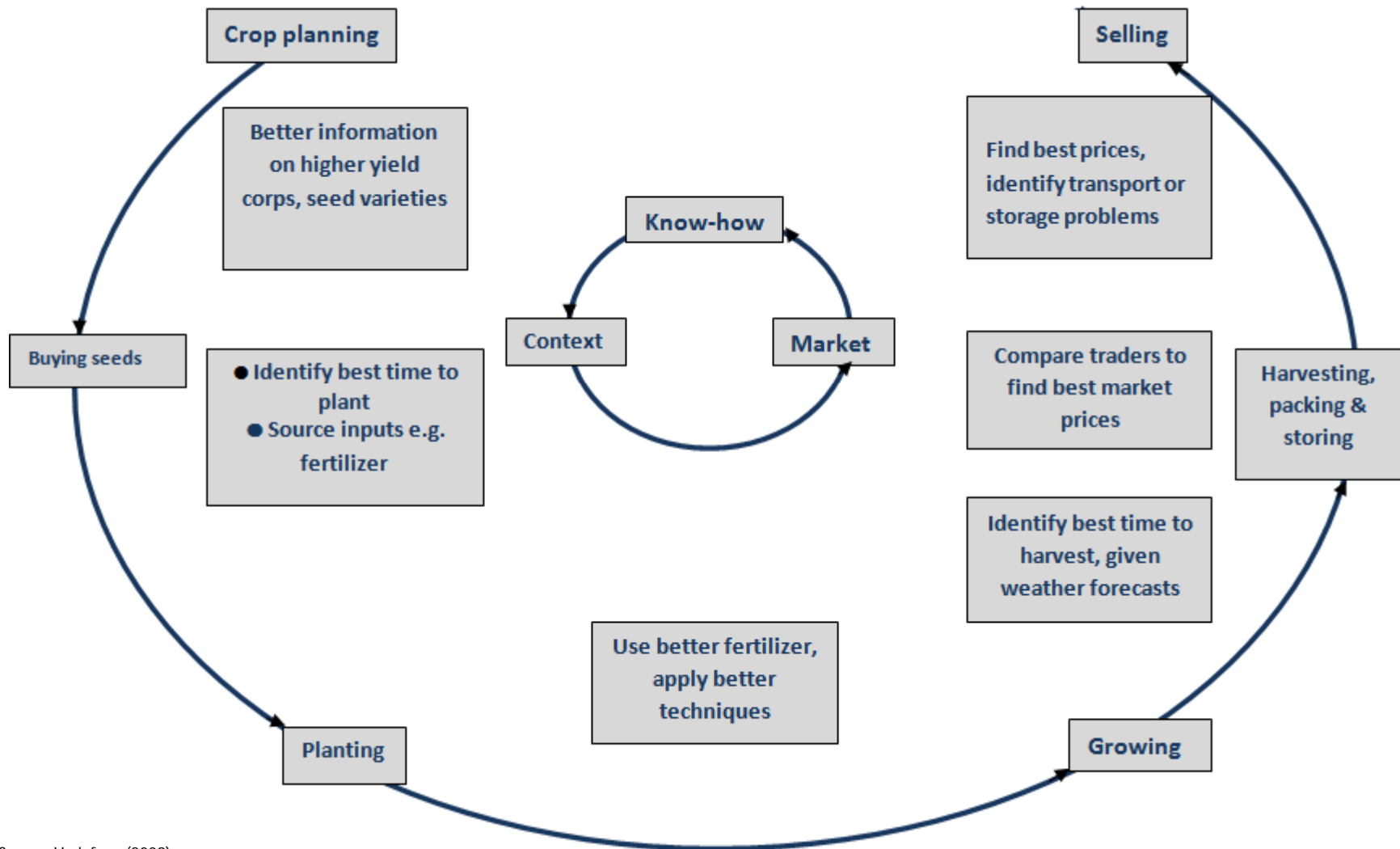
VAS/Content Ecosystem



Source: Accenture



M-Agriculture



Source: Vodafone (2009)



The key applications form Health in developing countries are:

- Education and awareness
- Remote data collection
- Remote monitoring
- Communication and training for healthcare workers
- Disease and epidemic outbreak tracking
- Diagnostic and treatment support

Source: M-Health for Development: The Opportunity for Mobile Technology for Healthcare in the Developing World" by Vital Consulting



Conclusions



Conclusions

- Rapid Mobile Phone Growth Should Continue
- Average Revenue Per User (ARPU) may decline further as rural mobile penetration growth dominates next phase of subscriber growth
- But declines in ARPU should be moderated by growth of VAS and Data Services.
- Data market growth will be supported by both the introduction of 3G networks (likely 2011 or early 2012) as well as prospective further cuts in Broadband wholesale costs and intro of second submarine fibre optic cable.
- Aggregate revenue growth for Telecoms sector as a whole likely to remain robust.
- Industry consolidation remains likely as well as prospective IPOs by at least one and possibly two industry players in the next 12-18 months.
- GOB support for the sector remains vital in terms of reducing SIM Tax to accelerate mobile penetration rates and also clarifying regulatory uncertainty about license renewal as rapidly as possible.

Thank You !

