

Chapter 2

Telecom Players, Regulatory Bodies, International Organizations and Regional Telecom Statistics: Global Overview

Technology and regulation are key drivers for telecom growth in emerging economies. Technology facilitates improved services and creates market conducive for growth. The evolution of technology decreases costs and facilitates rapid growth phase that appeals to many industry players. With an increasing number of players, each striving for larger market shares, regulation is critical and necessary to promote growth and harmony in the sector. Regulations ensure that fair practices are adopted by telecom operators in their efforts to increase and maintain market shares.

Globalization ensured faster roll-out of new technologies, decreased costs, reduced significant market power (SMP) by any single player and promoted competitiveness in the market place. Many economies have seen foreign direct investment as an accelerator for the growth of the telecom business. Due to an increasing number of players in the market and the increased role of regulators, it is critical for one to have basic familiarity with the major telecom players and regulators of the world. This chapter presents the information about the regulator, ministry & operators of top 5 countries chosen on the basis of mobile subscriptions. The chapter presents the list of top telecom firms in terms of brand value (2013 Statistics).

As per the ITU's mobile subscription statistics 2011, the top 15 regions in terms of mobile subscriptions include:

1. China,
2. India,
3. USA,
4. Russia,
5. Indonesia,
6. Brazil,
7. Japan,
8. Vietnam,
9. Germany,

10. Pakistan,
11. Italy,
12. Mexico,
13. Nigeria,
14. Philippines and
15. United Kingdom.

The top 15 regions represent over 50 % of the total mobile subscriptions in the world. During 2011, India and China accounted for over 50 % of the total APAC mobile subscriptions. In this chapter, we carry out a comparative analysis of some of the top regions in terms of average year on year growth rate, mobile penetration and subscription figures.

2.1 China

China, officially “The People’s Republic of China” is the first nation to reach the 1 billion mark in terms of telecom subscriber growth. China’s overall economic growth was achieved by its three-step development strategy, set in place in 1987. China was economically weak prior to 1949 and is today among one of the fastest developing nations in the telecom sector. China in its 12th Five Year plan talked about high bandwidth applications, spectrum usage and reframing, 4G services and improved information access for both public and private services.

2.1.1 Regulatory and Government Bodies: MII, MIIT and TAB

The Ministry of Industry and Information Technology (MIIT) in China is the body responsible for regulating telecom services and the equipment manufacturing industry. MIIT was established in 2008, prior to which The Ministry of Information Industry (MII) had established full regulation and operations in the telecom sector. The Telecommunications Administration Bureau (TAB) was set up in 2000 and was given the responsibilities to formulate plans, policies and measures for telecommunications development in China.

2.1.2 Mobile Operators: China Mobile, China Unicom and China Telecom

China Mobile, China Unicom and China Telecom hold most of the market share in China. As per company reports circa December 2012, China Mobile is the leading

mobile operator in the country with over 710.3 Million subscribers followed by China Unicom with a subscriber base of 239.31 million subscribers and China Telecom with 160.62 million subscribers.

2.2 India

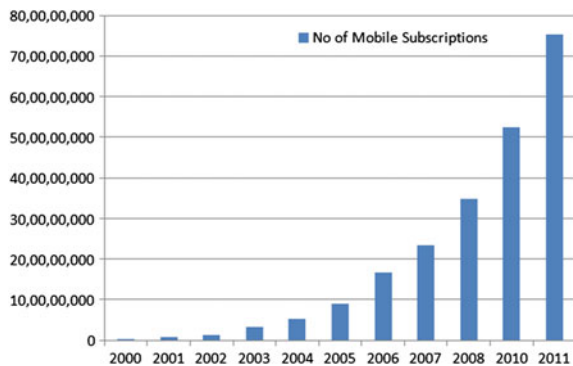
India, officially the Republic of India, is known for its diversity in region, religion, culture and consumer behaviour. Looking at the growth trajectory as per ITU statistics, the following graph shows a clear picture of year on year growth rate of wireless subscription of India which stood at over 64 % during 2000–2011 (Fig. 2.1).

As per the figures from a TRAI press release date 31 July 2015, the total subscriber base stood at 1009.31 million over 983.21 million wireless subscribers (TRAI 2015). India has the 2nd largest mobile subscriber base and is often recognized as one of the most competitive markets for operators.

2.2.1 Regulatory and Government Bodies: DOT, TRAI and TDSAT

At the ministry level, the “Department of Telecommunications (DOT)” performs the role of a licenser and policy maker, while TRAI, established in 1997 by an act of parliament, acts as an independent legal authority to regulate telecommunications and associated services. An amendment to the TRAI Act in the year 2000 led to the setting up of Telecom Disputes Settlement and Appellate Tribunal (TDSAT) which looks after settlements and disputes in the telecom industry. More information about the various roles and responsibility of TRAI and TDSAT will be described in the next unit.

Fig. 2.1 Yearwise Indian mobile subscription growth rate. Data source ITU statistics (2013) (*Year 2009 statistic is not available in the ITU statistics)



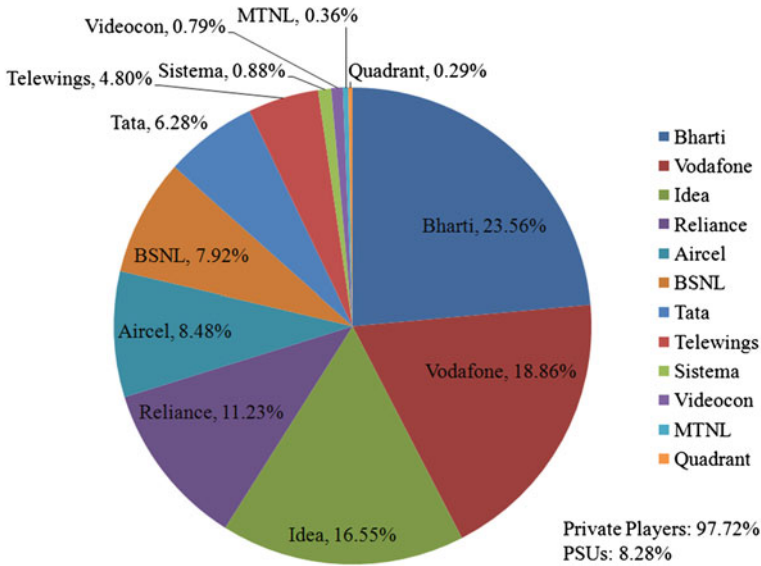


Fig. 2.2 Access service provider-wise market shares in the wireless subscribers as on 31st July 2015. *Source* TRAI (2015)

2.2.2 Mobile Operators: Incumbents and Private Players

India is a highly competitive market for existing and new entrants in telecommunications. As of July 2015, there were 12 service providers where Bharti Airtel, Vodafone and Idea holding approximately 59 % of the wireless market whereas BSNL and MTNL had a combined market share of 74.31 % in the fixed-line (wireline) segment.

Bharti Airtel is India's first private operator to launch landline services for subscribers. With 18 years of experience in providing telecom services, Bharti Airtel went on to become the world's third largest operator in terms of subscribers with operations in 20 countries. It is the 1st player to reach 100 and 200 million subscribers in the Indian telecom market. As on 31st July, 2015 (Fig. 2.2), Bharti Airtel had 23.56 % of total wireless subscriber share and occupies the top position. Vodafone which acquired controlling stake in Hutchison Essar in 2007 is currently the 2nd largest mobile operator in India in terms of subscribers. Idea Cellular headquartered in Mumbai is the third largest operator.

2.3 USA

The USA has always assumed the role of a technology leader and is a front runner in the testing and adoption of various mobile standards. With over 100 % mobile penetration and extremely mature market, growth rate in terms of subscriber base has seen

a downturn. When MCI Communications filed the antitrust lawsuit against Bell Systems, it resulted in the breakup of Bell Systems into seven Regional Bell Operating Companies (RBOCs). Over time, these divisions in the Bell Systems facilitated the formation of the current top two mobile operators—AT&T and Verizon.

2.3.1 Regulatory Body: FCC

Established in the year 1934 by the Communication Act, the Federal Communications Commission (FCC) regulates the Telecommunication sector for the entire US territory. FCC is further charted out into seven offices and six Bureaus which are further broken down into various divisions. It is the task of the “Wireless Telecommunication Bureau” to regulate mobile, broadband and spectrum usage in the US telecom industry. Enforcement Bureau of FCC is responsible to settle market disputes and handle customer complaints. Communication Act (1934) and Telecommunication Act (1996) are two important telecom acts in this sector.

2.3.2 Mobile Operators: AT&T, Verizon, Sprint and T-Mobile

Top mobile operators in terms of subscriber base include AT&T, Verizon, Sprint and T-Mobile, respectively. Verizon leads the mobile market with 31.2 % market share followed by AT&T (27.3 %), Sprint (10.3 %) and T-mobile (8.4 %) (Fig. 2.3).

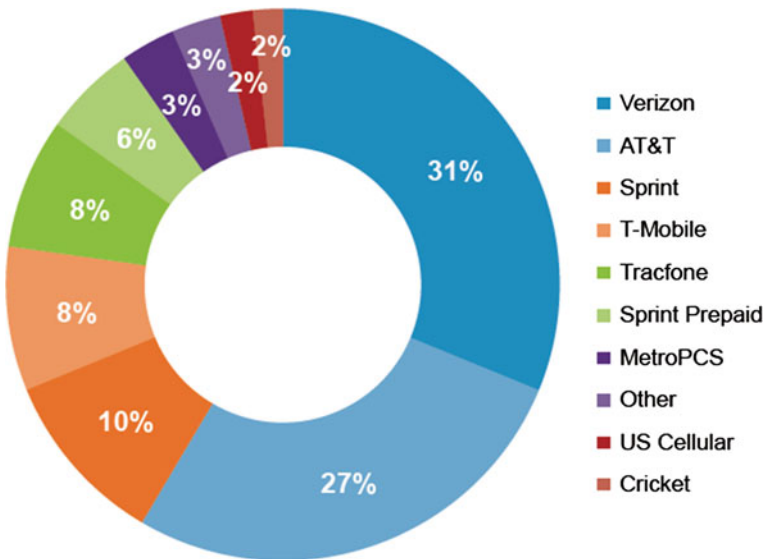


Fig. 2.3 USA mobile service providers market share as on Q4, 2012. *Source* comScore Inc (2013)

These four operators hold more than 75 % of the mobile market share leaving behind Altel, US Cellular, Tracfone, Cricket MetroPCS, Sprint and other operators to share the rest 10–15 % of the mobile market. With decreasing voice ARPU in this region, data ARPU is chalked up as the most appropriate driver of future growth.

2.4 Russia

Russia, officially The Russian Federation is the largest country in terms of area and 9th largest in terms of population. As per ITU statistics, Russia had 237 million wireless subscribers in 2011 with an annual mobile growth rate of 3.32 % and a mobile penetration of over 179 %. Telecom markets are at a high maturity level and most operators develop strategies for customer retention. The Russian telecommunications industry is known to be mainly driven by data services.

2.4.1 Regulatory Body: Minkomsvyaz

The Ministry of Telecom and Mass Communications of the Russian Federation (Minkomsvyaz) is the federal body that oversees and regulates the telecommunications sector in Russia. The ministry has the duties of both the policy maker and the regulator and takes care of allocation and conversion of the radio frequency spectrum. In its recent objective statements for the period 2012–2018, the ministry aims at providing the Internet to all the towns and villages by achieving 90 % penetration for broadband services.

2.4.2 Mobile Operators: MTS, Megafon, Vimpelcom and Tele2

Established in the year 1993, MTS was acquired by Sistema. MTS has been the leader in terms of implementing new technologies and acquiring market share.

Founded in 1993, Megafon is headquartered in Moscow and operates both as a fixed-line and a mobile service provider. Another operator Vimpelcom has completed 20 years of operations in 2012 with a presence in over 18 countries worldwide. With over 10 different brands, Vimpelcom provides mobile services in Russia under the brand “Beeline”. Tele2, a Pan European telecom operator, entered the Russian market in 2001 and launched its first commercial GSM network in the

year 2003. Tele2 has a presence in over 11 countries, out of which the Russian Market is one of the biggest. The telecom market is dominated by these service providers with MTS (31 %) being the leader followed by MegaFon (27 %) and VimpleCom (25 %), respectively, and the telecom market has entered the maturity stage (GSMA Intelligence 2012).

2.5 Indonesia

Indonesia, officially The Republic of Indonesia, is the third largest mobile market in APAC with over 211 million subscribers and more than 100 % mobile penetration. Indonesia has registered an average annual growth rate of mobile subscriptions of over 45 % during the period 2000–2011. By the end of 2017, mobile penetration is expected to reach 173.5 %, with nearly 444 million mobile subscribers (Business Monitor International 2013).

2.5.1 *Regulatory and Government Body: BRTI and MCIT*

Established in the year 2003, BRTI (Badan Regulasi Telekomunikasi Indonesia) is the Indonesian Telecommunication Regulatory Authority which reports to the Ministry of Communication and Information Technology. BRTI is divided into the Telecom Regulatory Committee and the Director General of Posts and Telecom.

2.5.2 *Mobile Operators: Telkomsel, XL Axiata and Indosat*

With growth in voice revenues approaching stagnation, Indonesian operators have increased focus on revenue from data streams. Usage of mobile commerce and social media on the mobile platform has increased in the past few years, and operators are focusing on non-voice streams for revenue growth by introducing data centric services in the market.

Established in the year 1995, Telkomsel is the leading mobile operator in Indonesia with over 120 million subscribers and one of the largest rural networks in the country. Telkomsel is the first mobile operator to reach 100 million subscribers and is one of the first operators to launch 3G services in Indonesia. XL Axiata started operations in 1996 and is currently the second largest mobile operator with over 42 million subscribers. Indosat is the third largest operator and offers mobile broadband services under the service names IM3, Mentari and Matrix.

The detailed list of countries with the name of the ministry, regulator, important laws, incumbent and private operators list can be found in table presented under Appendix A. This table gives the reader a brief overview of most of the telecom

regions worldwide. It can be observed that most of the regions have created the laws for establishment-independent regulators and transformed the regulatory roles from the ministry. The table also presents the Websites of the ministry/regulator where the reader can look at for detailed information of the telecommunication sector in those particular regions. The incumbent operators in many regions of the world have been partially privatized and the liberalization process has resulted in establishing competitive environment for the service providers.

2.6 International Organizations in Telecom Sector

Most of the regions in the world have initiated regulations in form of telecom policies, laws and acts to invite participation from foreign and domestic players to put an end to monopoly. Establishment of independent regulator has created a level playing field for the new players among the established incumbents and protecting their interest by promoting healthy competition and reducing the SMP of incumbents. Privatization has benefitted the subscribers with improved services and faster deployments of next-generation networks in the sector. To achieve full globalization in terms of connectivity, several international bodies had played a significant role in establishing standards that enabled international roaming. This section gives you a brief of several organizations and associations who have contributed significantly to the welfare and growth of telecom industry. ITU plays a key role in maintaining the numbering system, recommending ideal radio frequencies for different technologies, assessing future requirements for telecom growth and collaborating for the development of new-generation technological standards.

2.6.1 International Telecommunication Union (ITU)

ITU is the United Nations specialized agency for Information and Communication Technologies—ICTs. In Chap. 1, we have discussed three main areas of ITU where the agency works towards international cooperation between the Governments and private sector. ITU organizes its activities among various study groups which are part of the three main focus areas (radiocommunications, standardization and development) as depicted in Fig. 2.4.

ITU provides a platform for exchange of knowledge among the stakeholders which help in development of ICT sector. As a member of United Nations Development Group, ITU is committed to the development of ICT sector by establishing a platform for exchange of knowledge and international cooperation among various stakeholders in this sector. One of the significant works ITU performed was in the area of international radio frequency administration. The regulations regarding the international radio frequency are being approved by all the ITU member states. ITU-T is committed in development of standards for newer

ITU-T	ITU-R	ITU-D
<ul style="list-style-type: none">• SG2 - Operational aspects• SG3 - Economic and policy issues• SG5 - Environment and climate change• SG9 - Broadband cable and TV• SG11 - Protocols and test specifications• SG12 - Performance, QoS and QoE• SG13 - Future networks (& cloud)• SG15- Transport, Access and Home• SG16 – Multimedia• SG17 – Security• SG20 - IoT and applications, smart cities	<ul style="list-style-type: none">• SG1 - Spectrum management• SG3 - Radiowave propagation• SG4 - Satellite services• SG5 - Terrestrial services• SG6 - Broadcasting service• SG7 - Science services	<ul style="list-style-type: none">• SG1 - Enabling environment for the development of telecommunications/ICTs• SG2 - ICT applications, cybersecurity, emergency telecommunications and climate-change adaptation

Fig. 2.4 ITU study groups. Data source www.itu.int/

technologies in this sector and one of the focus groups (IMT-2020) is currently working on network standardization requirements for 5G. ITU-D aims at sustainable development and to spread equitable and affordable access for social and economic development. Another landmark activity undertaken by ITU was in drafting the “International Telecommunication Regulations (ITRs)” with document on final acts being presented at World Administrative Telegraph and Telephone Conference (WATTC). ITRs discuss the telecommunications service rules operating at international borders with the aim of promoting global connectivity.

2.6.2 European Union (EU)

The regulations and directives of European Union are being adopted by all the 28 member states of the Union. European Commission is EU’s executive body responsible for protecting the interest of the Union by proposing legislations, enforcing laws and managing EU policies. EU legislation (Directive 2002/21/EC) has brought in a new chapter in the history of telecommunications in the member states. This directive on “common regulatory framework for electronic communications networks and services” has transformed the telecommunication sector by stimulating investment, liberalizing the sector and benefitting the consumers with more choices and improved service quality. This directive also mandated the member states to establish National Regulatory Authorities (NRAs) who take care of the regulatory functions of the sector. This separation of operation and regulatory functions has been coupled with granting independence to NRAs to perform their

duties without any partialities. These steps have resulted in a more liberalized economy which helped the sector to attract foreign investment and provide better services for the subscribers. Several recent legislations of the European Union have led to further increase in cooperation among NRAs (No. 1211/2009) and better services with reduced roaming charges for consumers (No. 531/2012).

2.6.3 World Trade Organization (WTO)

WTO is an international organization which strives towards global economic growth and developments among its member states by reducing international trade obstacles and providing level playing field. WTO has currently 161 member states and is committed towards building trade capacity, implementing WTO agreements, involving in trade negotiations and dispute settlements among the member states. Department of Telecommunications (DoT) is the representative from India through Department of Commerce. Indian Government under the agreement with WTO has liberalized the telecommunication sector by allowing foreign equity in private firm that is registered in India. The discussions and negotiations among member states in during and post-Uruguay Round led to the development of regulatory framework for the basic telecommunications services. Member states who have submitted their commitments and signed the agreement have liberalized their telecom sector by lowering the entry barriers. Figure 2.5 highlights the various functions of WTO.

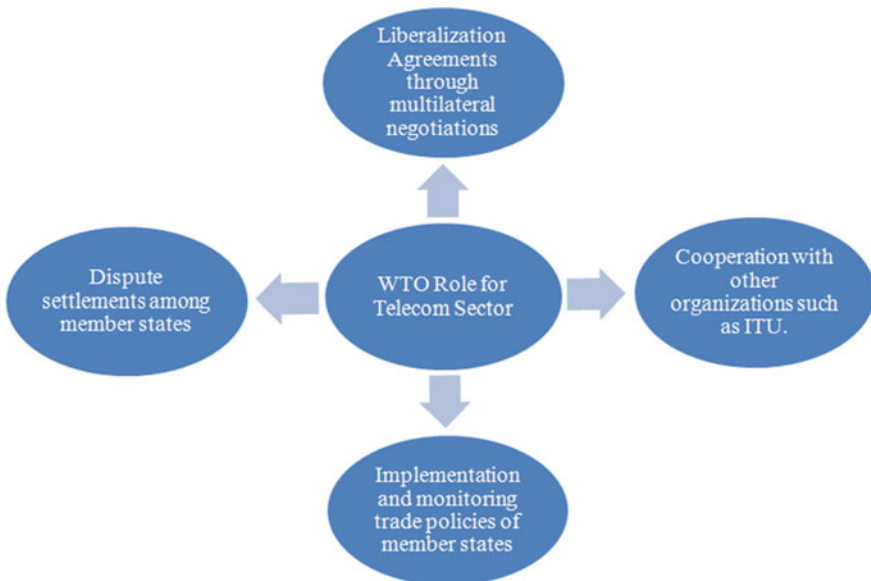


Fig. 2.5 Activities and functions of WTO. Data source https://www.wto.org/english/thewto_e/whatis_e/what_we_do_e.htm

2.6.4 *European Telecommunications Standards Institute (ETSI)*

ETSI is an international standardization organization committed towards producing standards in the area of ICT that are recognized and accepted globally. This not-for-profit organization has several types of committees who work towards fulfilling the sector, and technological area needs through standardization activities and cooperation with other international organizations. In the area of 3G and 4G mobile communications, ETSI is a partner in 3rd Generation Partnership Project (3GPP) where it collaborated with several other organizations such as Association of Radio Industries and Businesses (ARIB); Alliance for Telecommunications Industry Solutions (ATIS); China Communications Standards Association (CCSA); Telecommunications Standards Development Society, India (TSDSI); Telecommunications Technology Association (TTA); and Telecommunication Technology Committee (TTC). ETSI has also partnered with TTA, ATIS and CCSA in global oneM2M partnership which is committed towards developing technical specifications and standards for machine-to-machine (M2M) and Internet of Things. Figure 2.6 shows the various committees that handle the functions of ETSI.

TC Broadband Radio Access Network (BRAN) works in the area of BWA spectrum and is committed towards producing standards and specifications. This committee produced standards such as HiperLan1, HiperLan2 and HiperACCESS. TC Digital Enhanced Cordless Telecommunications (DECT) is working towards DECT technology developments in ultra-low energy and new generation. As discussed earlier, ETSI has partnered in 3GPP which has developed several technologies such as EDGE (44 and 45 Series), HSPA, LTE, LTE advanced, UMTS and WCDMA. TC ERM [Electromagnetic Compatibility (EMC) and Radio Spectrum Matters] looks after the ETSI harmonized standards and coordinates with several committees in issue related to radio equipments and radio spectrum usage.

TC Satellite Earth Stations and Systems (SES) works in the area of satellite navigation systems and equipments and looks at the implemented protocols in this area. TC TETRA and Critical Communications Evolution (TCCE) works towards the development of standards in critical broadband communications and maintenance of existing TETRA standards. Reconfigurable Radio System (TC RRS) has four working groups with tasks in system aspects, security of RRS systems, radio equipment architecture and synergies establishment for public safety. ISG Open Radio equipment Interface (ORI) works towards the interoperability issues and strives towards making the elements between the base stations fully interoperable. More information about these committees and groups can be accessed from the official ETSI website.

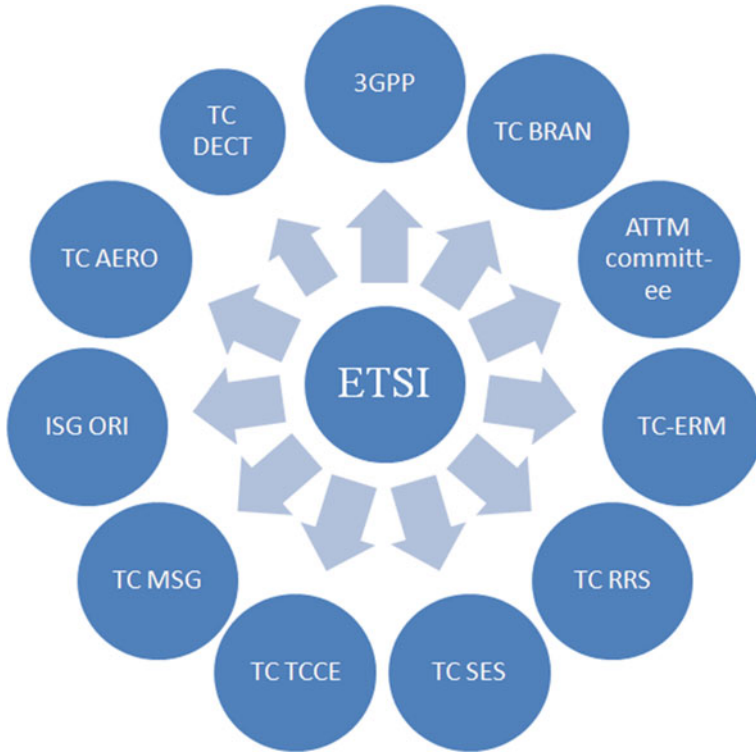


Fig. 2.6 ETSI committees and groups in wireless systems. Data source <http://www.etsi.org/technologies-clusters/clusters/wireless-systems>

2.6.5 International Organization for Standardization (ISO)

National standard bodies of countries become the members of ISO. Bureau of Indian Standards (BIS) is the Indian member of ISO working towards development of standards and certifications. ISO standards help the MNCs, small and medium enterprises to build trust and gain consumer confidence which results in more business opportunities in the market place. ISO develops the standards for telecommunications sector in six stages as illustrated in Fig. 2.7.

ISO is working towards development of standards in several fields of telecommunications such as telecommunication infrastructure, telecommunication services and applications, telecommunication systems, telecommunication terminal equipment, radiocommunications, mobile services, Integrated Services for Digital Network (ISDN), fibre-optic communications, telecontrol telemetering, electromagnetic compatibility and in many other areas in this sectors.

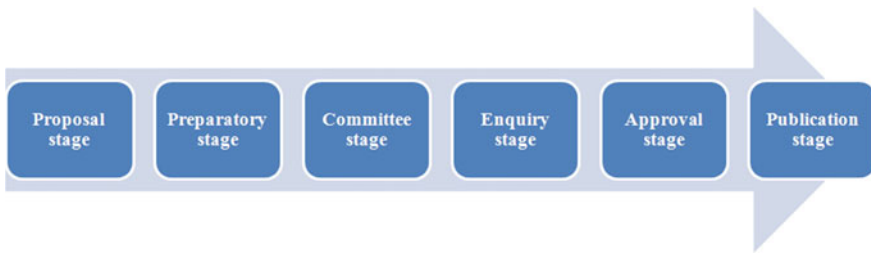


Fig. 2.7 Stages in telecommunication standard development process of ISO. Data source http://www.iso.org/iso/home/standards_development/resources-for-technical-work/support-for-developing-standards.htm

2.6.6 GSM Association (GSMA)

Mobile operator becomes an important entity in telecom value chain. GSMA represents the interests of mobile operators across the globe in various events and international forms. GSMA works towards building consensus among stakeholders involved in setting the frameworks and standards in respect of operational and technical matters (<http://www.gsma.com/aboutus/leadership/committees-and-groups/working-groups>). GSMA has several working groups and committees who work in several areas and programmes such as public policy, personal data, mobile for development, female digital economy, mobile economy, digital commerce, Network 2020, OneAPI, managed services and connected living programmes. Figure 2.8 highlights various areas where GSMA records the industry perspectives towards introducing pro-investment telecommunication policies.

GSMA is focussed on these areas with the aim to achieve their programme goals. As the representative of GMS operators in many international forums, GSMA aims at achieving the following goals:

- Defining best practices in disaster management process.
- Creation of scalable, replicable and commercially sustainable agricultural information and advisory services.
- To reduce global mobile gender gap and improve socio-economic benefits to women.

The list of various other international organizations is mentioned in Appendix B.

2.7 Top Telecom Firms in Terms of Brand Value

Brand equity is defined by David Aaker as the value a brand generates for the product (Aaker 1991). Brand equity is the output of any branding effort which reflects the dominance of the organization in the market place. Brand equity plays a



Fig. 2.8 GSMA mobile policy areas. *Data source* <http://mph.gsma.com/publicpolicy/handbook>

critical role in helping companies gain a competitive edge over others in the business. Brand equity also represents the intangible part (good will) of an enterprise and defines the enterprise core value. As capital intensive as the telecom is, brand equity plays an important role and is one of the top parameters considered during mergers and acquisitions and joint ventures. Brand equity and brand value are two terminologies that measure the firms value. Brand value gets reported in the balance sheet of an organization.

Brand equity and brand value are being measured by several consulting firms that use proprietary methods to value a firm, product and consumer level. Interbrand, a leading brand consulting firm releases the list of top global brands. “Brand Finance” is the world’s leading brand valuation consulting firm which periodically releases a list of the top 500 brands in terms of brand value. Top 36 telecom firms in terms of brand value released by Brand Finance are being depicted in the following diagrams.

As per the 2013 statistics, eleven firms in the telecom sector made it to the top 100 most valuable brands with only one firm among the top 10 list. Among the top 500 firms, 49 firms from the telecom sector made the list and include firms headquartered in USA, India, South Africa, Taiwan, Sweden, Saudi Arabia, Russian Federation, Norway, the Netherlands, Mexico, Republic of Korea, Japan, Italy, Hong Kong, United Kingdom, France, Finland, Spain, Germany, China, Switzerland, Canada, Brazil, Australia and UAE.

USA registered the most number of firms in top 500 brands followed by the Russian Federation, China, Japan and Canada, each with 3 firms in the list. Bharti Airtel is the only firm from India that made the list but with a drop of 126 ranks compared to its previous year rank (Fig. 2.9).

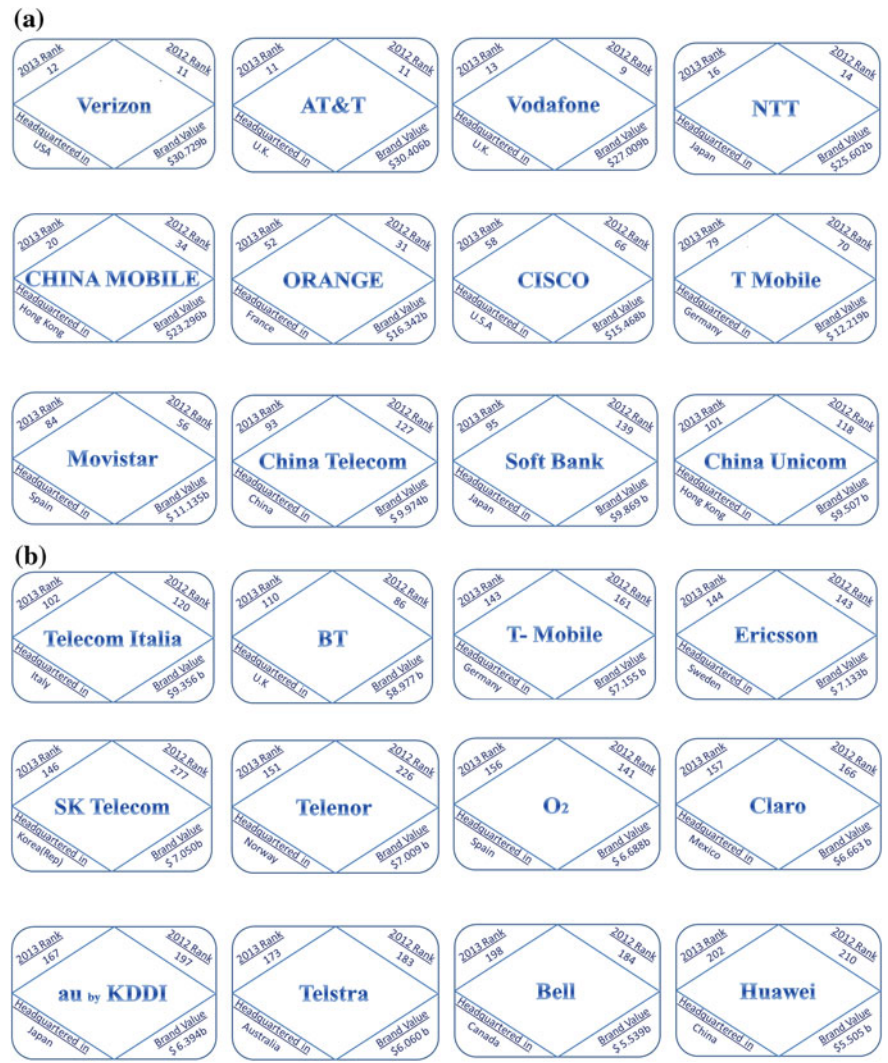


Fig. 2.9 a–c Top telecom companies (operators+infrastructure service providers) in terms of brand value. Data source Brand Directory (2013)

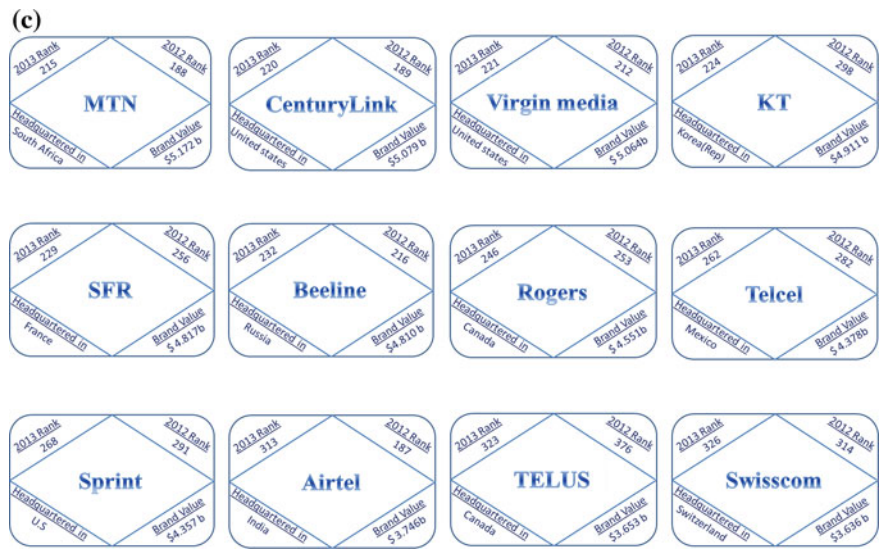


Fig. 2.9 (continued)

2.8 Telecom Growth Rate Statistics

Growth rate analyses give an idea of market attractiveness and dynamics of the industry which helps us in identifying markets that are in growth, maturity and decline stages for particular services and products. The telecom industry has seen positive growth in most regions for the past decade with APAC and African geographies clearly emerging as the next major areas for growth. These two geographies are driving growth for most organizations and presenting enormous opportunities for new operators.

2.8.1 Growth Rate Statistics of Top Regions in Mobile Subscriptions

Many regions have maintained a healthy growth rate during the past 10–15 years. This growth rate has led to over 100 % mobile penetration and improved rural access to telecom services. As per the ICT statistics, we have calculated near approximate figures for a 11-year period (2000–2011) and 5-year period (2006–2011). During the 11-year period, Nigeria has seen the highest average year on year growth rate of an impressive 169.24 % followed by Pakistan at 80.04 % followed by India at 66.94 % (Fig. 2.10).

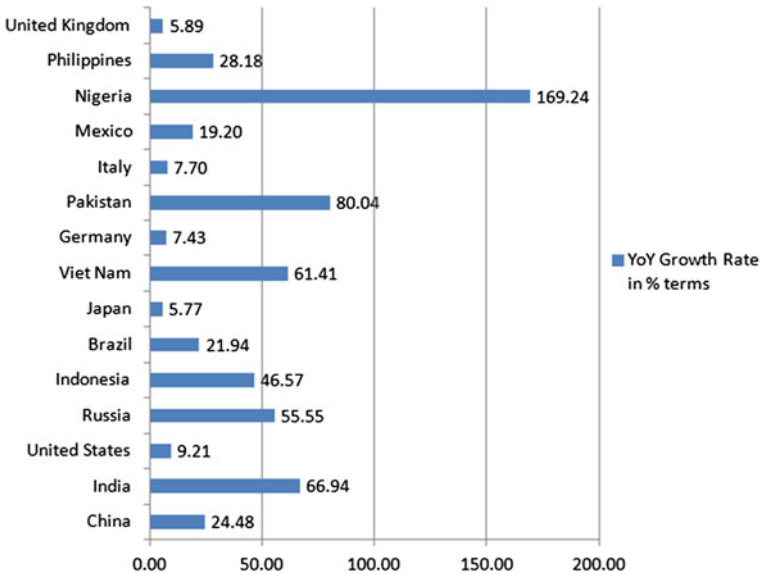


Fig. 2.10 Average year on year growth rate of mobile subscriptions during 2000–2011. *Data source* ITU (2013)

UK registered the least average year on year growth rate of 5.89 % whereas average year on year growth rates for Philippines, Mexico, Italy, Germany, Vietnam, Japan, Brazil, Indonesia, Russia, USA and China has registered in at 28.18, 19.20, 7.70, 7.43, 61.41, 5.77, 21.94, 46.57, 55.55, 9.21 and 24.48 %, respectively.

Closer examination of 5-year growth rates during 2006–2011 reveals Vietnam to have witnessed the highest mobile subscription growth rate of 49.88 %. India has registered the next highest growth rate of 36.76 % followed by Pakistan at 26.90 %. Germany, Japan and USA have registered lowest average year on year growth rates among top 15 regions in terms of subscriber base (Fig. 2.11).

Of all the top regions with at least 1 million subscriptions during 2011, Uzbekistan, Uganda, Vietnam, Afghanistan and India have registered the top 5 average year on year growth rates in the world. Only those regions with maximum available information were chosen for this statistic. The chart below presents an overview of top regions that have registered over 20 % of average year on year growth rate during the period 2006–2011. Out of these 26 regions, Africa has seen 20 % average year on year growth rate in over 9 regions: Uganda, Côte d'Ivoire, Sudan, Egypt, Tanzania, Kenya, Ghana, Congo (Dem. Rep.) and Nigeria.

APAC registered more than 20 % average year on year growth rate in over 8 regions: Vietnam, Afghanistan, India, Iran (I.R.), Bangladesh, Indonesia, Sri Lanka and Pakistan, whereas 5 regions from Arab States, 2 regions from CIS and 2 regions from the Americas have registered more than 20 % average year on year growth rate during 2006–2011 and none of the regions from Europe registered growth rates of over 20 % (Fig. 2.12).

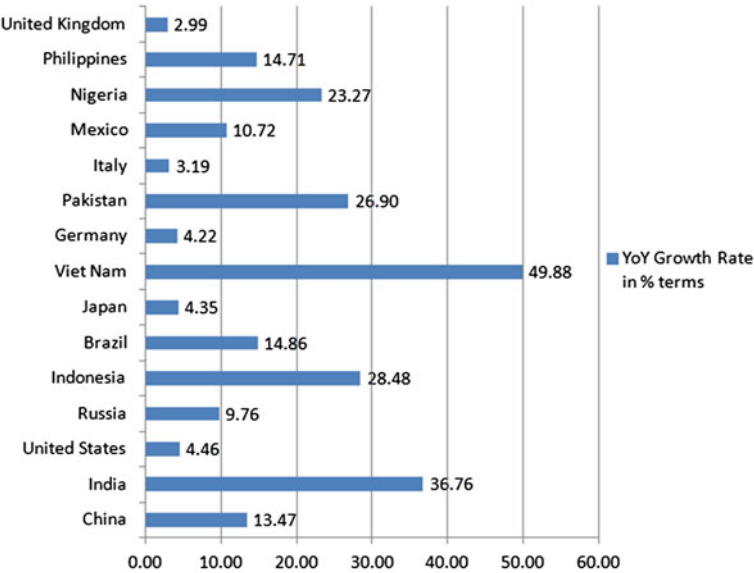


Fig. 2.11 Average year on year growth rate of mobile subscriptions of Top 15 regions during the year 2006–2011. *Data source* ITU (2013)

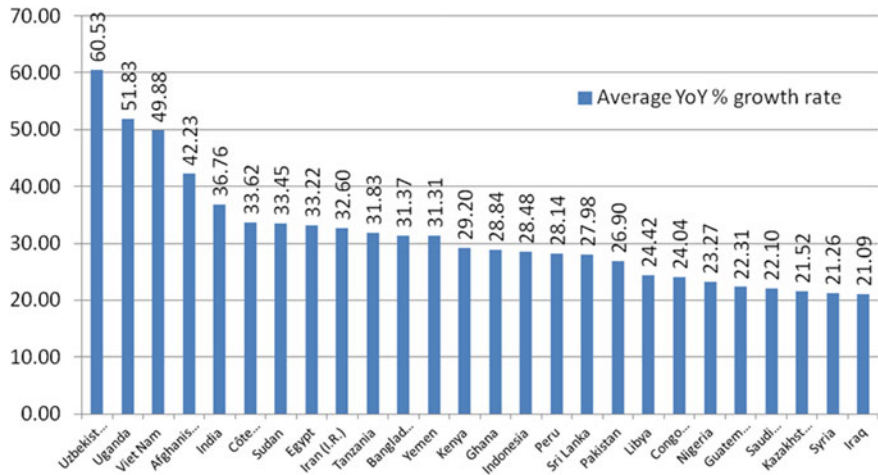


Fig. 2.12 Average year on year growth rate for all the regions during the year 2006–2011 (mobile subscriptions > 1 million). *Data source* ITU (2013)

2.8.2 Growth Rate Statistics of Top Regions in Fixed-Line Telephony Subscriptions

With mobile penetration in many regions of the world moving towards or exceeding 100 %, the number of fixed-line telephone subscriptions has seen a major setback in terms of growth rates. In many regions, mobile operators have devoted resources towards the development of marketing strategies, and brand communication efforts directed towards the mobile platform. Very few advertisements and promotions schemes talk about the operators' fixed-line telephone service with most of the publicity efforts of the telecom companies being directed towards mobile services.

Due to more focus from the industry on wireless services, customers were ignorant on the schemes and latest gadgets available on fixed-line telephone subscriptions. In many regions, fixed-line telephone subscriptions and handsets have come with on-demand video services, but a simple pilot survey suggests that subscribers have no idea of such devices and services in the market place.

For our study on fixed-line telephone subscriptions, we relied on ITU's statistics during the period 2006–2011. In many regions of the world during the period 2006–2011, mobile penetration rates have improved tremendously which led to the decreased use of fixed-line telephone services.

During the year 2011, India stood 11th across all regions in the world and 4th in APAC in terms of fixed-line telephone subscriptions. China stands No.1 with over 28 million fixed-line telephone subscriptions followed by USA and Japan at 14.58 and 6.46 million, respectively.

These top 10 regions account for more than 50 % of all the fixed-line telephone subscriptions in the world. During the period 2006–2011, out of the top 10 regions, 5 regions have recorded negative growth rate and only 1 region registered a double-digit growth rate.

Figure 2.13 gives a clear outlook of growth rates of all the regions with more than 1 million fixed-line subscriptions in the world. It can be plausibly inferred that a majority of regions have faced negative or single-digit growth rates, suggesting that the overall market for the fixed-line telephone is on a decline. This would result in reduced price for services and less number of players who rely purely on fixed-line telephone subscribers.

Among all the regions in the chart below, only Indonesia registered a double-digit growth rate and 12 regions have registered less than 1 or negative growth rates. China, India, Turkey, Italy and USA had the least growth rate among these 22 regions. The negative and slow growth rate can be attributed to high mobile subscriptions and improved mobile access and penetration levels.

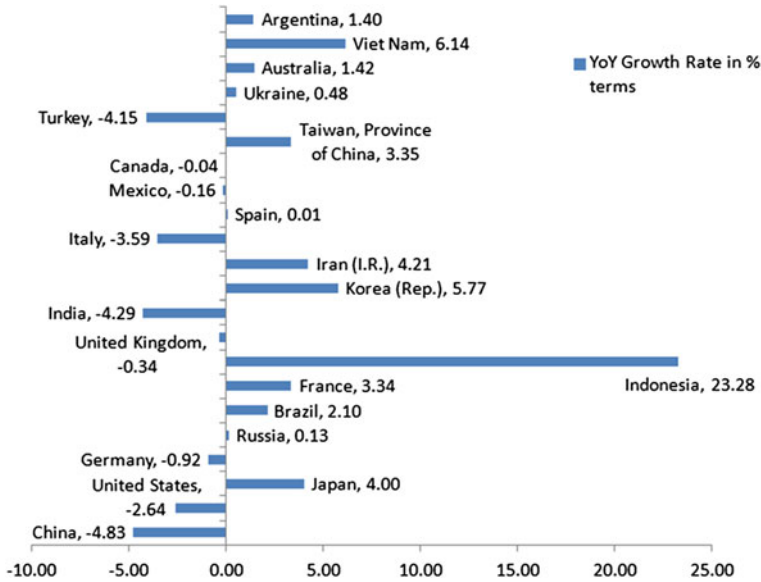


Fig. 2.13 Average year on year growth rate during the year 2006–2011 for fixed-line subscriptions. *Data source* ITU (2013)

2.9 Concluding Remarks

Mobile subscriptions have helped the nations to improve the connectivity, and several regions in the world have achieved teledensity of over 100 %. This achievement would not have been possible by private sector participation and liberalization policies put into effect by their respective Governments. The transformational changes in both the technology front and the industry and regulatory practices could not be achieved without the involvement of various international organizations which helped in liberalizing the sector and have a healthy growth stage. The international organizations discussed in this chapter have played a key role in promoting growth in this sector and harmonizing all the effort towards providing better services for next generations. Telecom statistics presented in the chapter provides basic understanding to readers about the growth rate of mobile and fixed-line telephony subscriptions in top regions of the world. Many regions that were once dominated by fixed-line telephone services have seen a gradual fall in the number of subscriptions and the market growth is primarily in mobile services. India is not an exception to this global trend and liberalization policies have encouraged private players to enter and dominate the telecom sector in terms of subscriptions and growth rates.

In the next chapter, we present the duties of the regulator and its important role in improving teledensity, broadband services and rural coverage particularly in Indian Telecommunication sector.

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