STATS WINDOW

The Pacific Business Review International has taken an initiative to start a section which will provide a snapshot of major Global & Indian economic indicators and industry review alternatively.

A snapshot of the section in upcoming issues is hereunder:

July 2015	Telecom Sector: Global Scenario
Aug. 2015	Economy at a Glance (Global & Indian)
Sept. 2015	Hospitality Sector: Global Scenario
Oct. 2015	Economy at a Glance (Global & Indian)
Nov. 2015	Education industry: Global Scenario
Dec. 2015	Agriculture Sector: Global Scenario

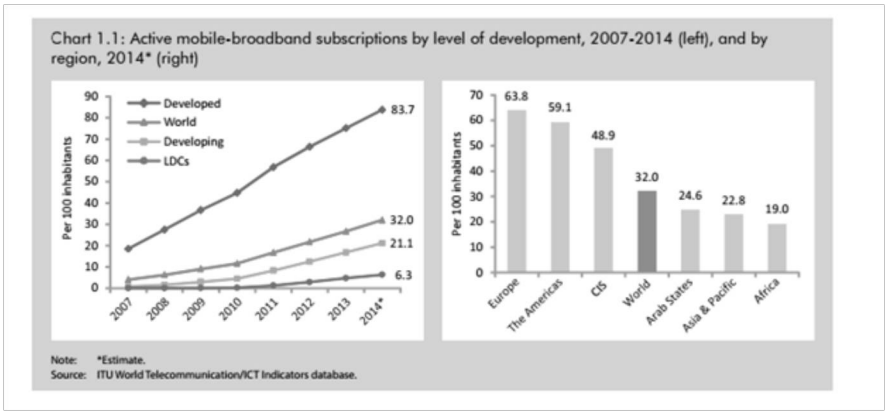
Telecommunication Industry: A Global Perspective

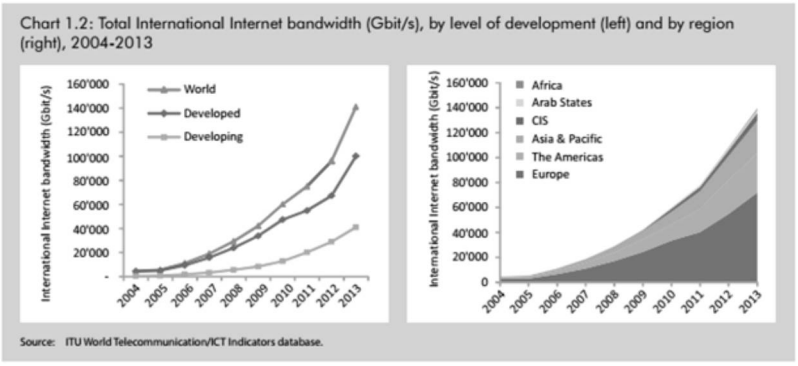
Telecommunication occurs when the exchange of information between two entities includes the use of technology. Communication technology uses channels to transmit information (as electrical signals), either over a physical medium or in the form of electromagnetic waves.

Early means of communicating over a distance included visual signals, such as beacons, smoke signals,semaphore telegraphs, signal flags, and optical heliographs. Other examples of pre-modern long-distance communication included audio messages such as coded drumbeats, lung-blown horns, and loud whistles. Modern technologies for long-distance communication usually involve electrical and electromagnetic technologies, such astelegraph, telephone, and teleprinter, networks, radio, microwave transmission, fiber optics, and communications satellites.

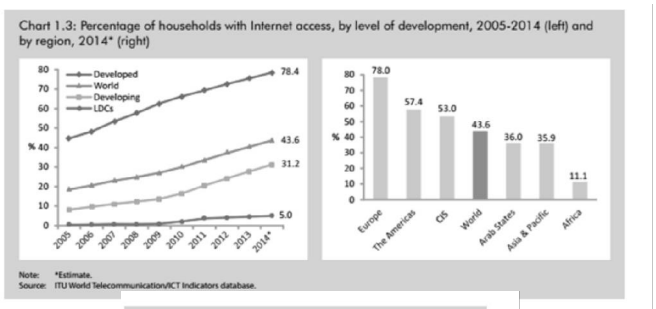
A revolution in wireless communication began in the first decade of the 20th century with the pioneering developments in radio communications by Guglielmo Marconi, who won the Nobel Prize in Physics in 1909.

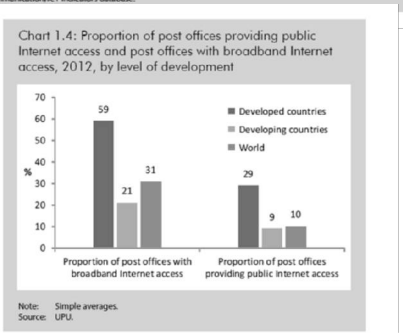
In 2014, the number of fixed-broadband subscriptions reached a total of 711 million globally, corresponding to a penetration rate of almost 10 per cent, as against 220 million and 3.4 per cent in 2005. Distinct patterns can be observed, though, between developed and developing regions. In most developed countries, fixed-broadband penetration has already reached relatively mature levels, with a penetration of 27.5 per cent and continuous low growth, at around 3.5 per cent, in 2014. In developing countries, fixed-broadband penetration growth rates have dropped from 18 per cent in 2011 to 6 per cent in 2014, reaching an overall (low) penetration rate of 6 per cent by end 2014, and less than 1 per cent in LDCs. In the latter, fixed-broadband infrastructure and uptake have not (yet) materialized. Mobile broadband is growing fastest in developing countries, but the divide between developed and developing countries remains huge Mobile broadband remains the fastest growing market segment, with continuous double-digit growth rates in 2014 and an estimated global penetration of 32 per cent – four times the penetration rate recorded just five years earlier. This growth is driven by the availability and uptake of more affordable devices (smartphones) and types of plans on offer in the market.

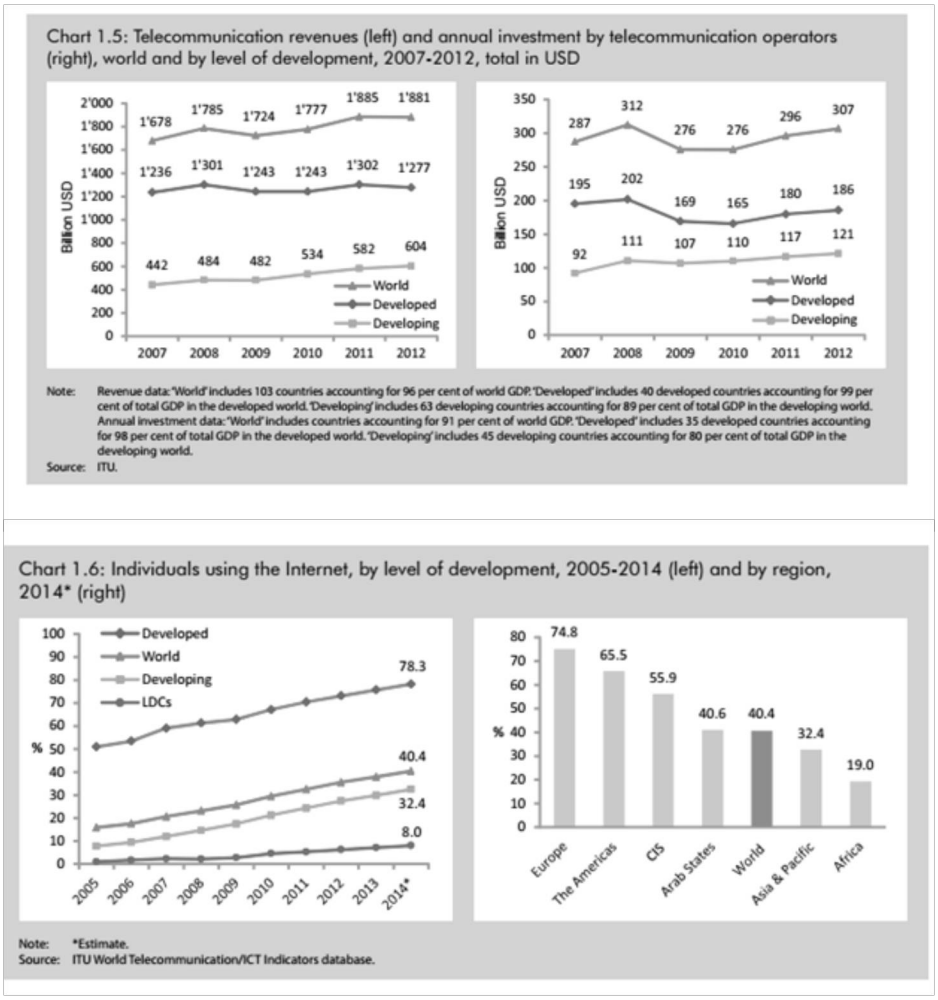




In developed countries, 78 per cent of households have Internet access, as compared with 31 per cent in developing countries and 5 per cent in LDCs By end 2014, almost 44 per cent of the world's households had Internet access at home, up from 40 per cent one year earlier and 30 per cent four years earlier (Chart 1.3). Household Internet access is growing steadily, and strongly, at 9 per cent over the past year. Global growth is mostly driven by developing countries, where household Internet access is growing at 14 per cent as against around 4 per cent in developed countries. By end 2014, 78 per cent of households in developed countries will have Internet access, as compared with 31 per cent in developing countries and 5 per cent in LDCs.

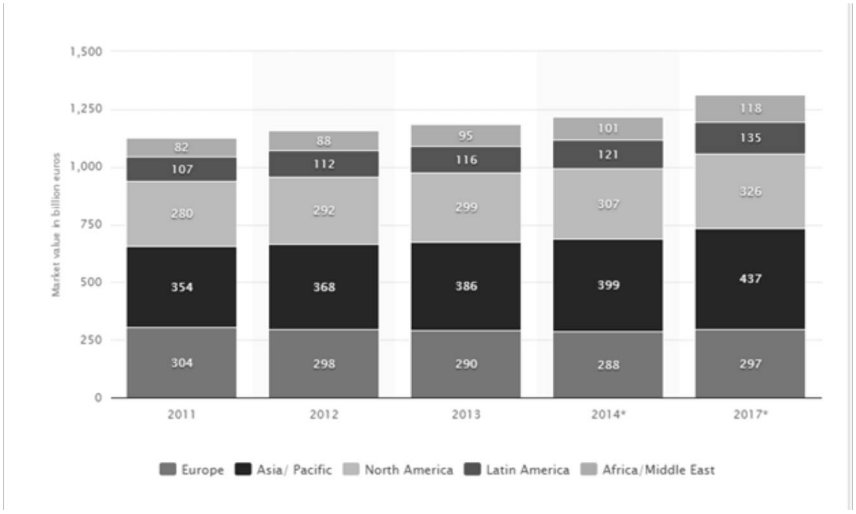


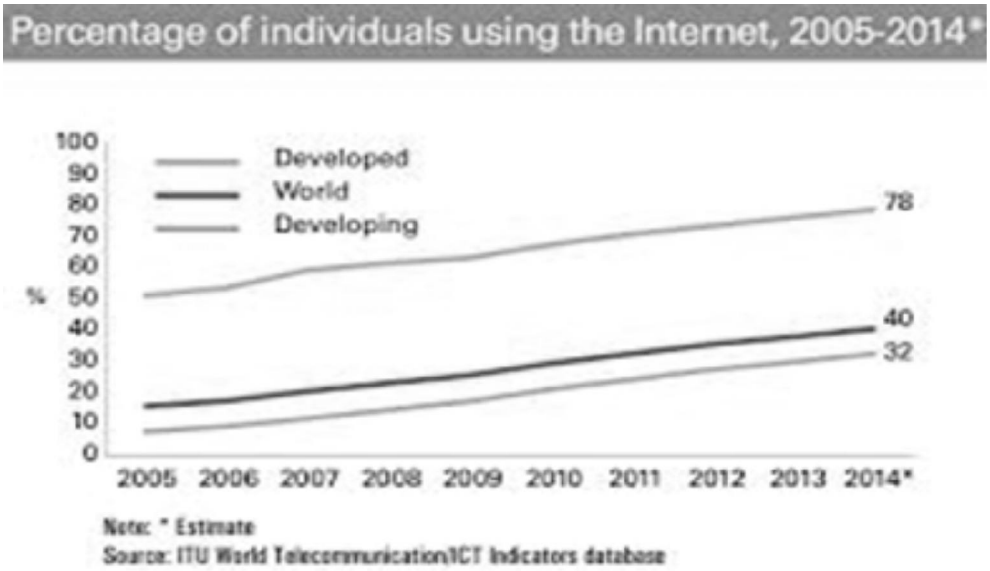


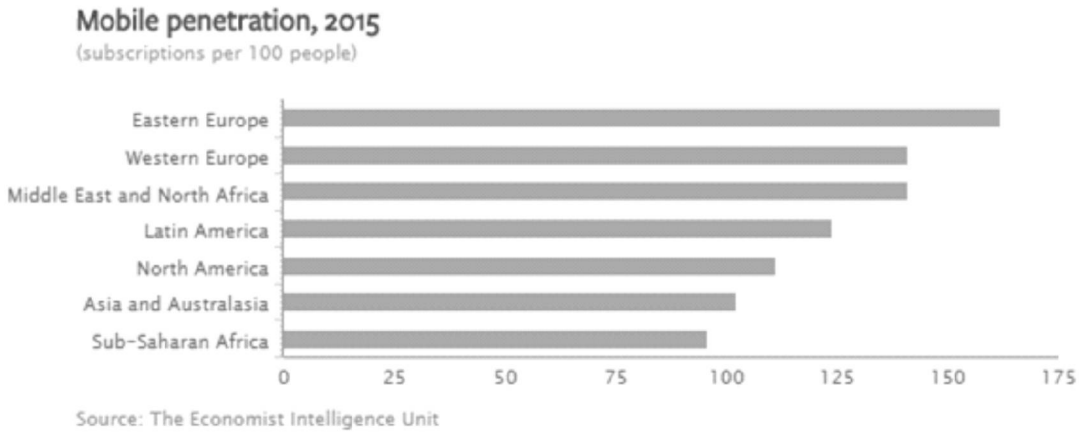


Global telecommunications services market value from 2011 to 2017, by region (in billion euros)

The statistic depicts the the revenue of the global telecommunications services industry from 2011 to 2013, broken down by region. A revenue forecast for 2014 and 2017 is also shown. The revenue of the telecommunications services industry in Europe stood at 298 billion euros in 2012.







Smartphone Users and Penetration Worldwide, 2012-2018

	2012	2013	2014	2015	2016	2017	2018
Smartphone users (billions)	**1.06**	**1.40**	**1.76**	**2.04**	**2.29**	**2.52**	**2.73**
—% change	58.7%	32.3%	25.1%	16.3%	12.2%	10.2%	8.1%
—% of mobile users	25.8%	31.9%	37.8%	41.8%	45.0%	47.7%	49.8%
—% of population	15.2%	19.8%	24.5%	28.2%	31.3%	34.2%	36.5%

Note: CAGR (2012-2018)=17.0%; individuals of any age who own at least one smartphone and use the smartphone(s) at least once per month
Source: eMarketer, June 2014

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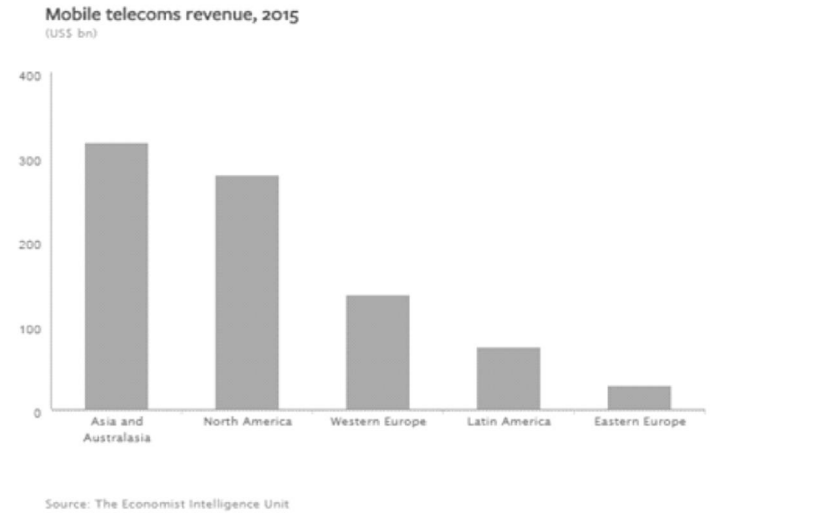


	(millions)									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
Fixed-telephone subscriptions										
Developed	570	565	546	544	562	553	540	526	515	511
Developing	673	696	708	705	692	676	661	652	643	636
World	1,243	1,261	1,254	1,249	1,254	1,229	1,201	1,178	1,158	1,147
Mobile-cellular subscriptions										
Developed	992	1,127	1,243	1,325	1,383	1,404	1,411	1,447	1,490	1,515
Developing	1,213	1,618	2,125	2,705	3,257	3,887	4,453	4,785	5,171	5,400
World	2,205	2,745	3,368	4,030	4,640	5,290	5,863	6,232	6,662	6,915

Active mobile-broadband subscriptions										
Developed	N/A	N/A	225	336	450	554	707	828	939	1,050
Developing	N/A	N/A	43	86	165	253	475	726	991	1,265
World	N/A	N/A	268	422	615	807	1,182	1,554	1,930	2,315
Fixed (wired)-broadband subscriptions										
Developed	148	188	219	250	271	291	306	321	332	345
Developing	71	96	127	161	197	236	282	315	341	366
World	220	284	346	411	468	526	588	635	673	711

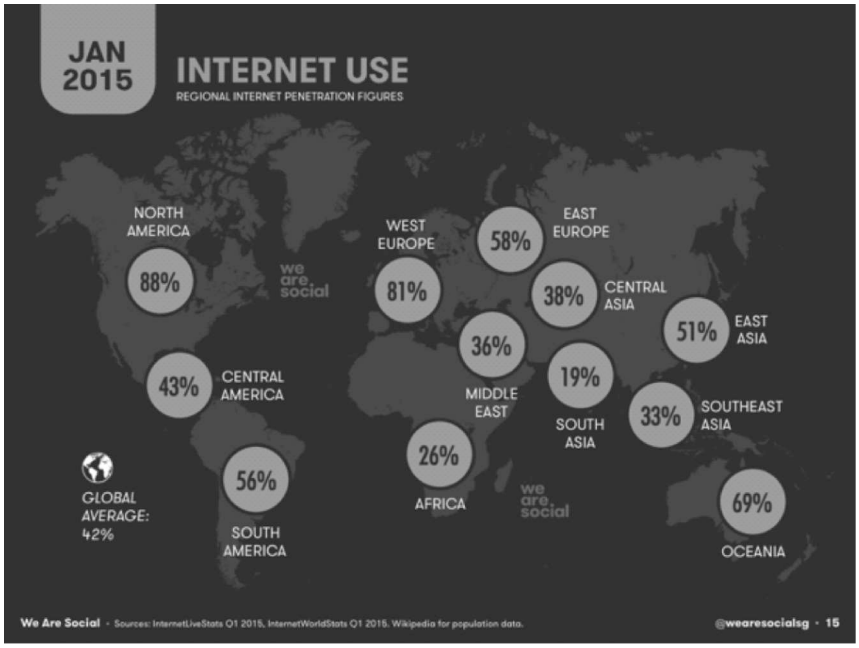
	(millions)									
	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014***
Individuals using the Internet										
Developed	616	649	719	753	776	832	876	912	947	981
Developing	408	502	645	808	974	1,201	1,395	1,598	1,763	1,942
World	1,024	1,151	1,365	1,561	1,751	2,032	2,271	2,510	2,710	2,923

Rounded values. N/A: Not available.
The developed/developing country classifications are based on the UN M49, see: http://www.itu.int/en/ITU - D/Statistics/Pages/definitions/regions.aspx

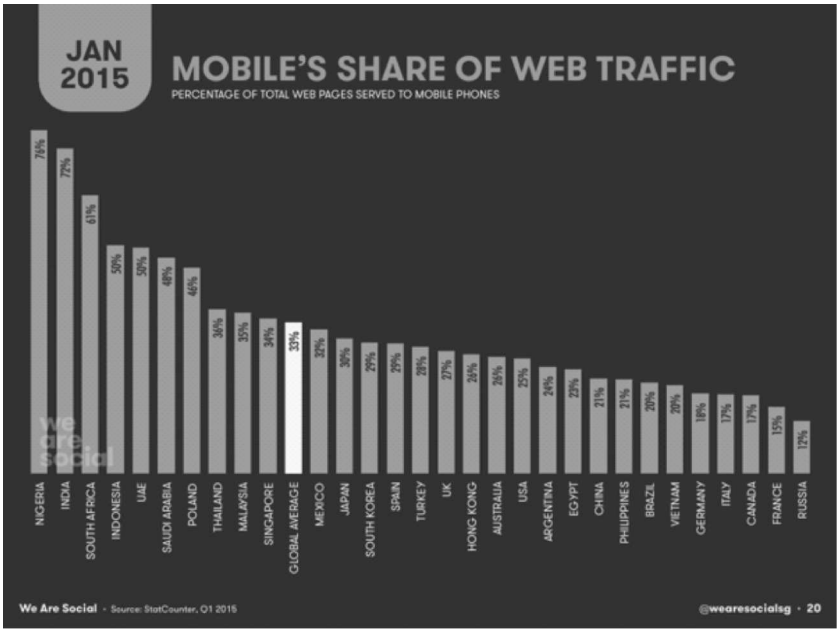
Half a billion new users got connected to the web in 2014, an increase of 20% bringing the total number of web surfers to 3 billion worldwide.

At the start of 2014, just 35 % of the world had access to the internet – but this figure increased to 42% in January 2015.

In Western Europe and the U.S., more than 80 percent of the population have access to the Internet, but in East Asia, South America and Eastern Europe, connectivity is between 50 and 60%. South Asia comes in last position with just 19%.

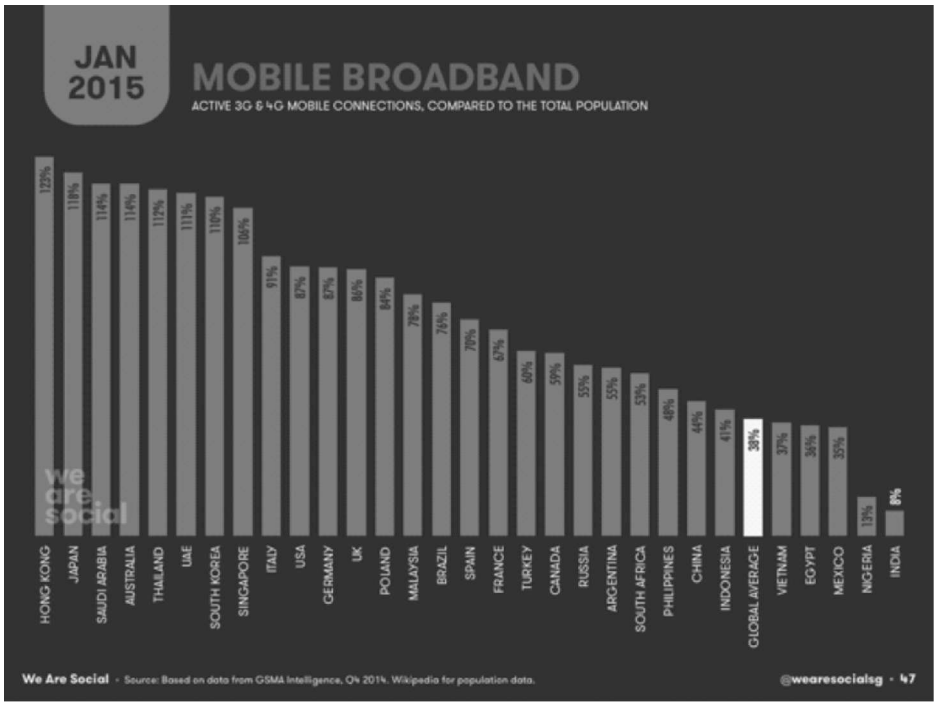


As the clock struck midnight this January, it was evident the mobile Internet has grown enormously. In terms of the total web pages services to mobile devices, the global average is now 33% of all pages. The average is blow away by Internet users in Nigeria, who top the league at 76% followed by India at 72%:

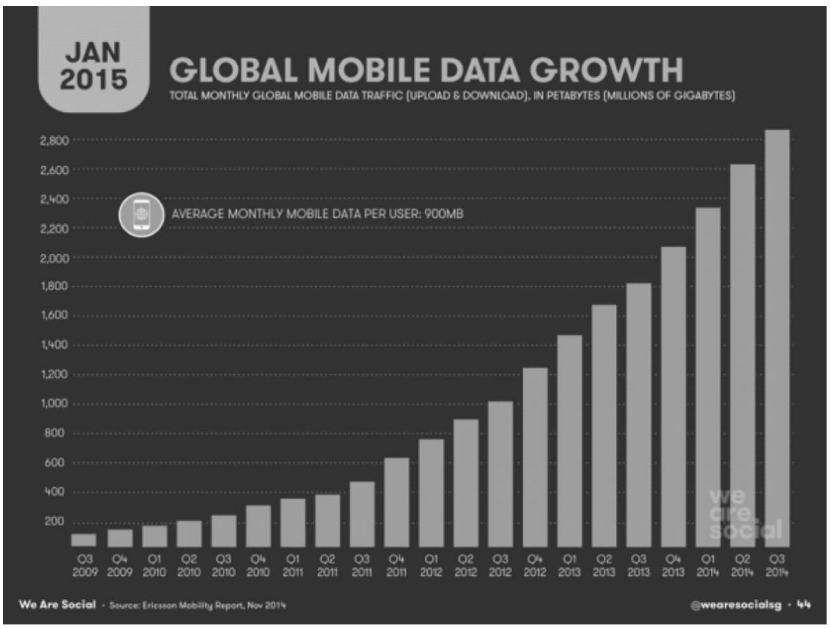


The number of active 3G and 4G connections (i.e. mobile broadband) for the total population has also risen dramatically. In the UK, the percentage of mobile broadband stands at 89%, but the figure is exceeded by Hong Kong (12%), Japan (118%) and many more.

Surprisingly, India has one of the lowest percentages – a measly 8% of the population has an active mobile broadband connection:



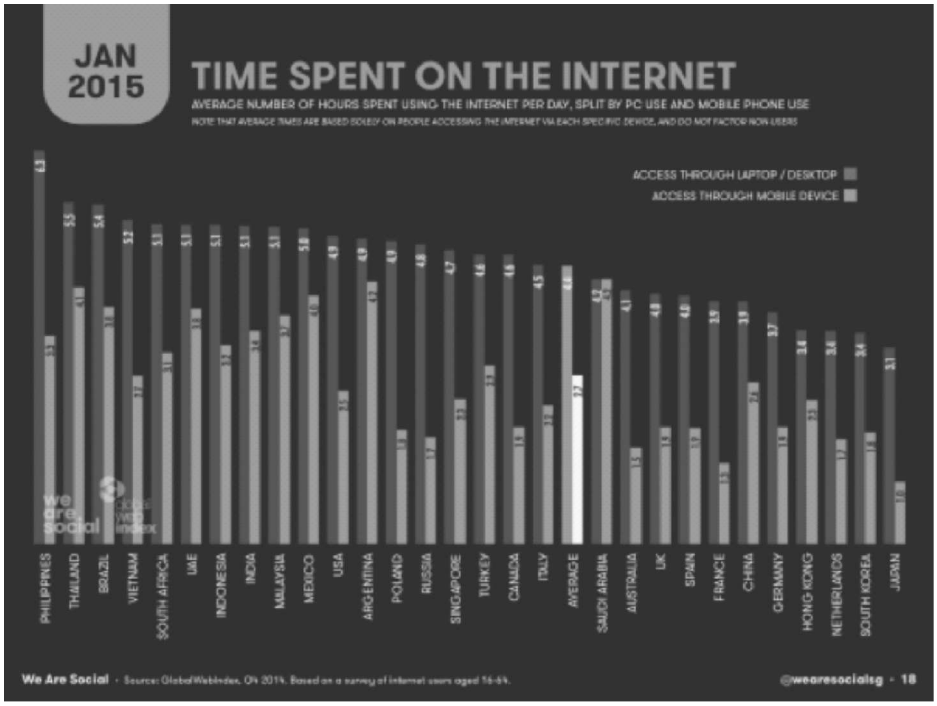
Today, the average monthly mobile data per users has ballooned to 900 MB, with nearly 3,000 Petabytes (millions of Gigabytes) of data sent over the mobile web per month in Q3 2014:



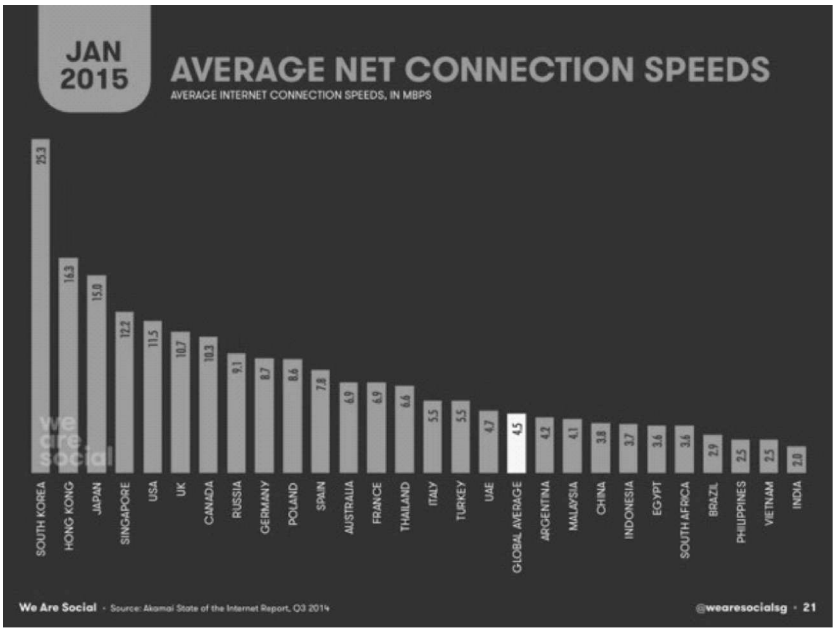
Time spent online

Going into 2015, more people are spending time on the web. Just ten years ago, the average user of the Internet spent less than 2 hours every day online, but today that stands at almost 4.5 hours *every day*.

The regional differences are revealing too. People in South East Asia spend on average 6 hours each day online, whereas Americans spend around 5 hours online each day. Japan comes in last with 3 hours each day, but South Korean web users (where Internet speeds are incredibly fast) also spend just 3.5 hours a day online.



The Internet is getting faster

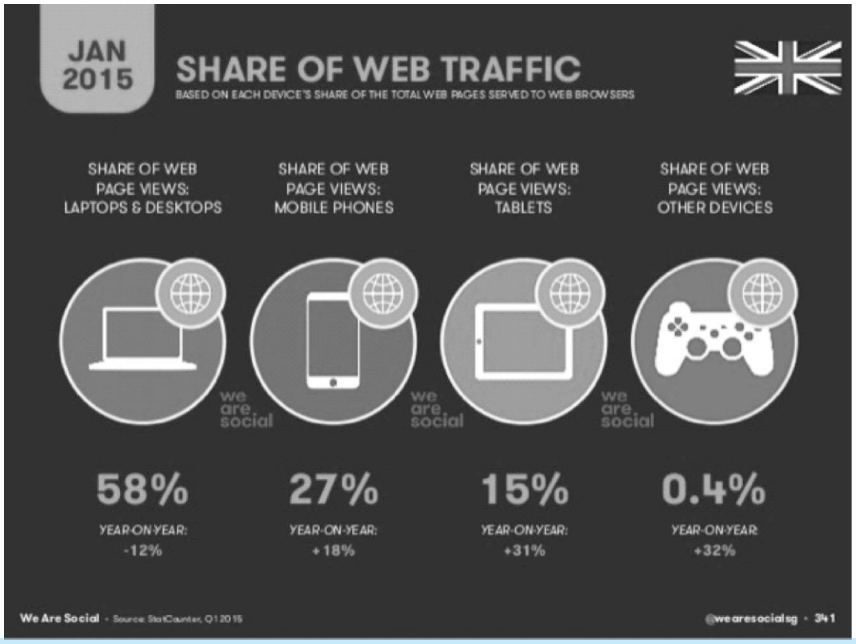


The Internet is not only reaching more people in the world, but is also predictably getting faster. The average worldwide speed in 2013 was just 3.8 Mbps, but today it's increased to 4.5 Mbps.

South Korea leads the average net speed ranking with an incredible 25.3 Mbps, followed by Hong Kong with 16.3%. The only other countries with average Internet speeds over 10 Mbps are Japan, Singapore, the USA, the UK and Canada. Once again, India comes in last place with just 2 Mbps.

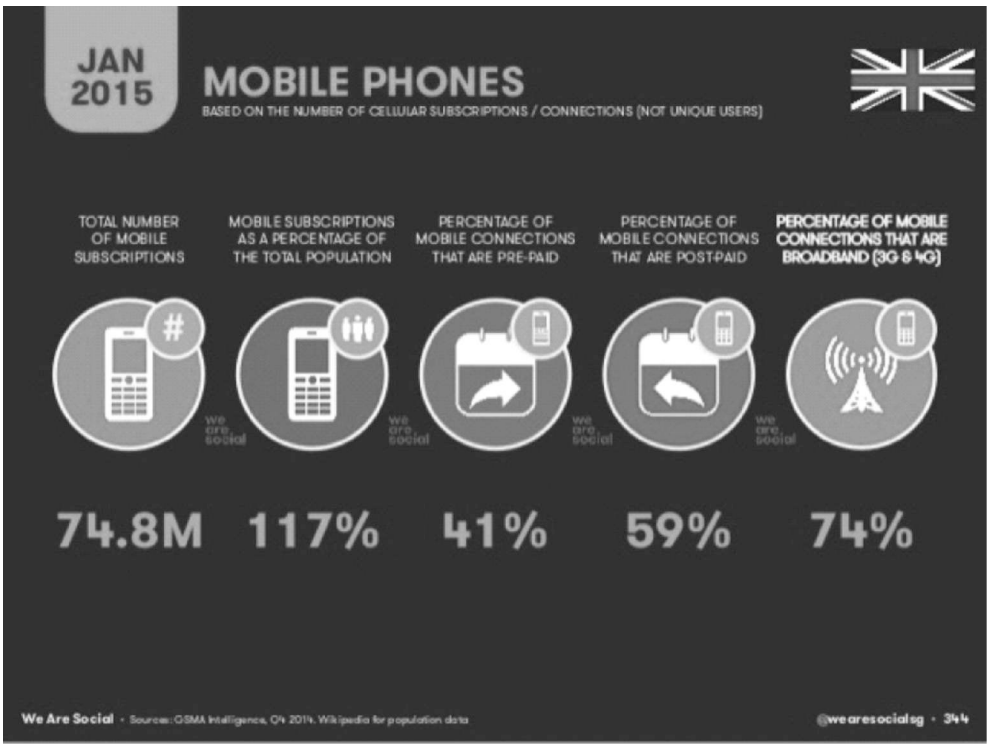
Internet use increasingly mobile

The following charts mainly cover the UK, but you can find all the global and per-country details on the We Are Social website.In the UK, 27% of web pages were served to mobile devices (an 18% rise) and 15% to tablets (an even larger rise of 31%, despite a slowdown in tablet sales). It was the desktop and laptop PC category that lost the most, falling 12% to 58% of web pages served. Combining mobile and tablet page views of 42%, it seems likely such devices will dominate web usage in a couple of years.



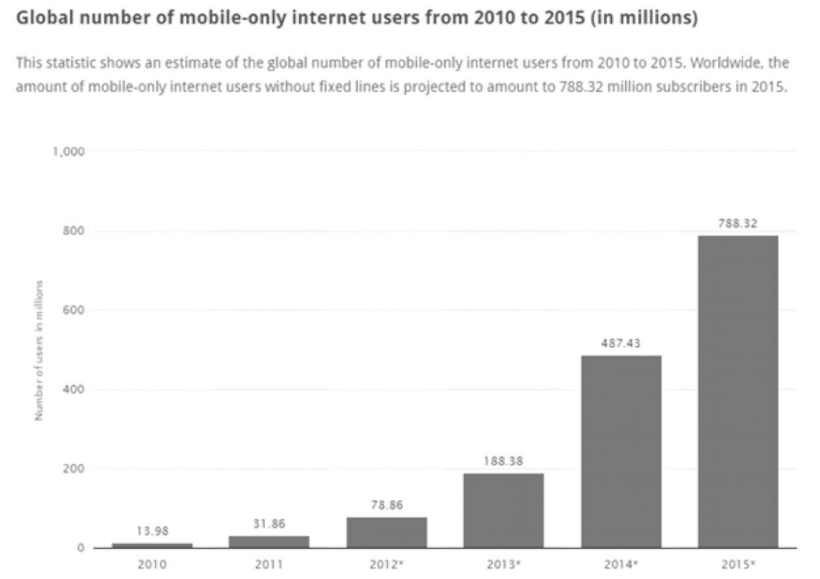
More mobile phones than ever

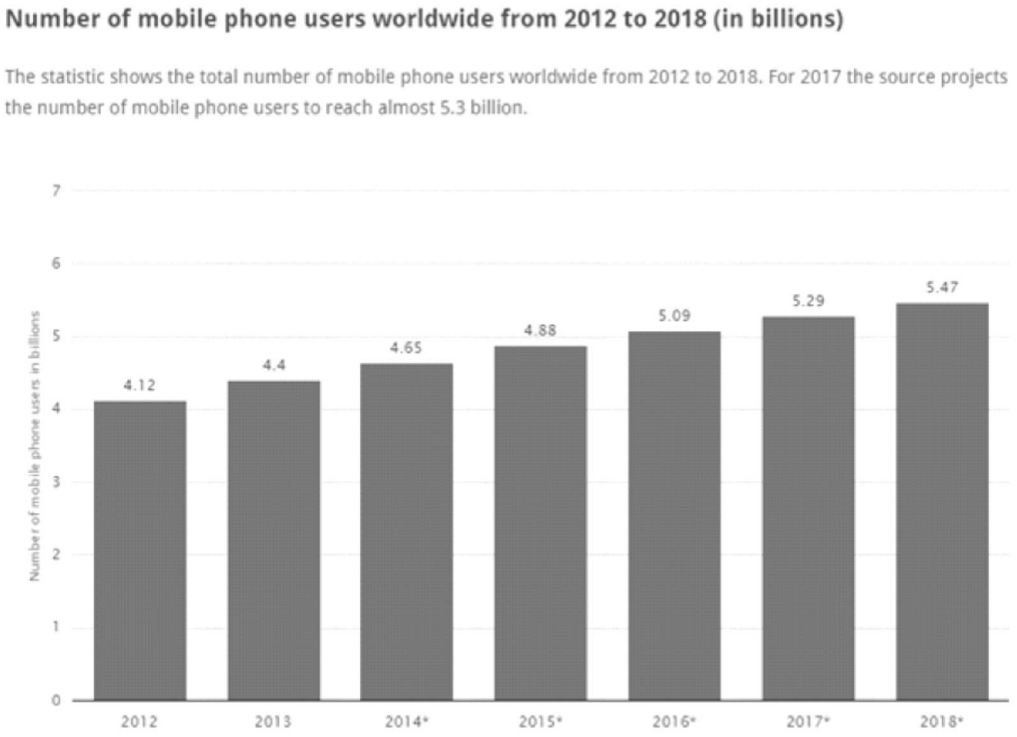
In the UK, there are now almost 75 million mobile subscriptions (117% of the population), split 41%/59% between pre-paid and post-paid.Having seen the start of 4G roll-outs in the UK, the vast proportion of mobiles are now connected to 3G or 4G networks, with just 26% on 2G-only.



The number of unique mobile users exceeded 50% of the world's population as of September 2014, with a projected yearly growth of more than 5 percent. This means another 200 million *new* mobile users in the next year.

Smartphones now account for the vast majority of mobile use at 38% of the world's active mobile connections. And 40% of the world's mobile connections are considered 'broadband' enabled with access to a 3G or better network. In this regard, the UK is doing fairly well compared to the global picture.

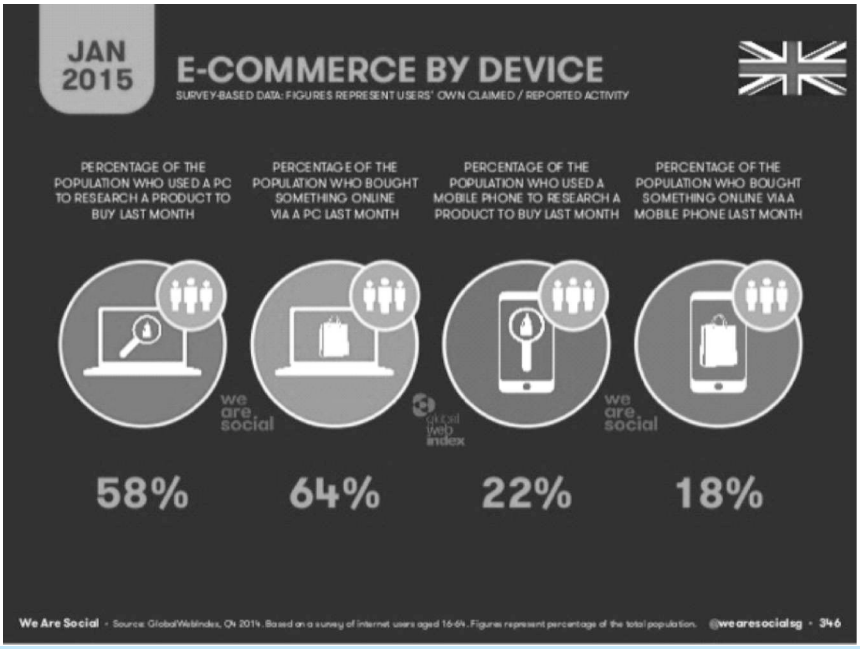




E-Commerce

The UK leads the world in e-commerice activities, with two-thirds of the population having bought something online in the past month using a PC. Germany and South Korea rounded out the number two and three positions with 64% and 62% respectively, while America came in fourth.Unfortunately, even though South East Asian countries are at the front of the pack when it comes to mobile use, many are lagging behind in terms of e-commerce, partly due to the lack of high speed Internet connections and poor online shopping experiences.

Mobile shopping is on an upward trajectory worldwide, with South Korean and Chinese consumers using their phones to shop a third of the time. In Kenya, mobiles are used extensively to buy goods and trade using the popular mPesa service, as well as pay taxes and arrange finance.



Indian Telecom Industry

Telecom services have been acknowledged globally as an essential tool for the socio-economic development of a nation. India is currently the world's second-largest telecommunications market and has registered exceptional growth in the past few years.

The Indian mobile economy is growing rapidly and will contribute approximately US$ 400 billion to India's gross domestic product (GDP), according to report prepared by GSMA in collaboration with BCG.

The rapid strides in the telecom sector have been facilitated by liberal policies of the Government of India that provide easy market access for telecom equipment and a fair regulatory framework for offering telecom services at affordable prices. The deregulation of foreign direct investment (FDI) norms has made the sector one of the fastest growing and a top five employment opportunity generator in the country.

Market Size

Telecommunications is one of the prime support services needed for rapid growth and modernisation of various sectors of the economy. Driven by strong adoption of data consumption on handheld devices, the total mobile services market revenue in India will reach US$ 29.8 billion in 2014 and is expected to touch US$ 37 billion in 2017, registering a compound annual growth rate (CAGR) of 5.2 per cent, according to research firm IDC.

According to a study by GSMA, it has been expected that smartphones will account for two out of every three mobile connections globally by 2020 and India is all set to become the fourth largest smartphone market.

India is projected to have 213 million mobile internet users by June 2015, a 23 per cent rise over a six month period, according to Mobile Internet in India 2014 report.

The broadband services user-base in India is expected to grow to 250 million connections by 2017, according to the UK-based GSM Association (GSMA).

India saw the fastest growth in new mobile-phone connections with 18 million net additions in the third quarter of 2014, followed by China with 12 million new additions, according to a report by Swedish mobile network equipment maker Ericsson.

The Indian telecom sector is expected to create four million direct and indirect jobs over the next 5 years on the back of the government's efforts to increase penetration in rural areas along with the growth in the smartphone numbers and internet usage, according to estimates by Randstad India. "The telecom sector has been growing aggressive at an average for 35 per cent a year for close to two decades," said Mr K Uppaluri, CEO, Randstad India.

Investment

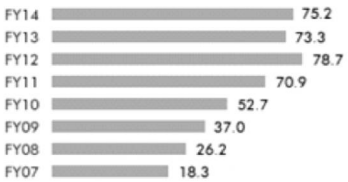
With daily increasing subscriber base, there have been a lot of investments and developments in the sector. The industry has attracted FDI worth US$ 16,994.68 million during the period April 2000 to January 2015, according to the data released by Department of Industrial Policy and Promotion (DIPP).

Some of the major developments in the recent past are:

- Sterlite Technologies Ltd has announced an annual seed fund of US$ 100,000 to strengthen India's investments in broadband technology research, by investing in Indian start-ups, working on innovative broadband deployment technologies.
- Maxx Mobilink plans to start production of mobile handsets at its Haridwar plant, beginning with assembling devices from April 2015. Maxx will invest over Rs 6 crore (US$ 965,615.81) initially in setting up the R&D laboratory.
- Huawei Technologies has won two contracts worth a combined US$ 120 million from Bharti Airtel and Idea Cellular to upgrade their wireline networks.
- Tata Communications has invested in acquiring capacity in Seabras-1, a submarine cable being developed between the US and Brazil, seeking to increase services in the Latin American region.
- Bharti Airtel and IHS Holding have signed an agreement under which latter will acquire about 1,100 telecom towers across Zambia and Rwanda.
- Ericsson has won a seven-year deal worth more than US$ 1 billion to manage the network of Reliance Communications across 11 service areas, making the Swedish telecom gear maker the only service provider to manage the pan-India network of a mobile phone operator.

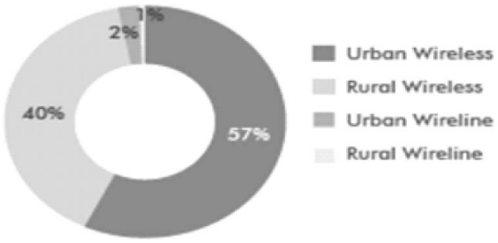
Teledensity in India

In March 2014, total telephone subscription stood at 933 million, while teledensity was at 75.2.



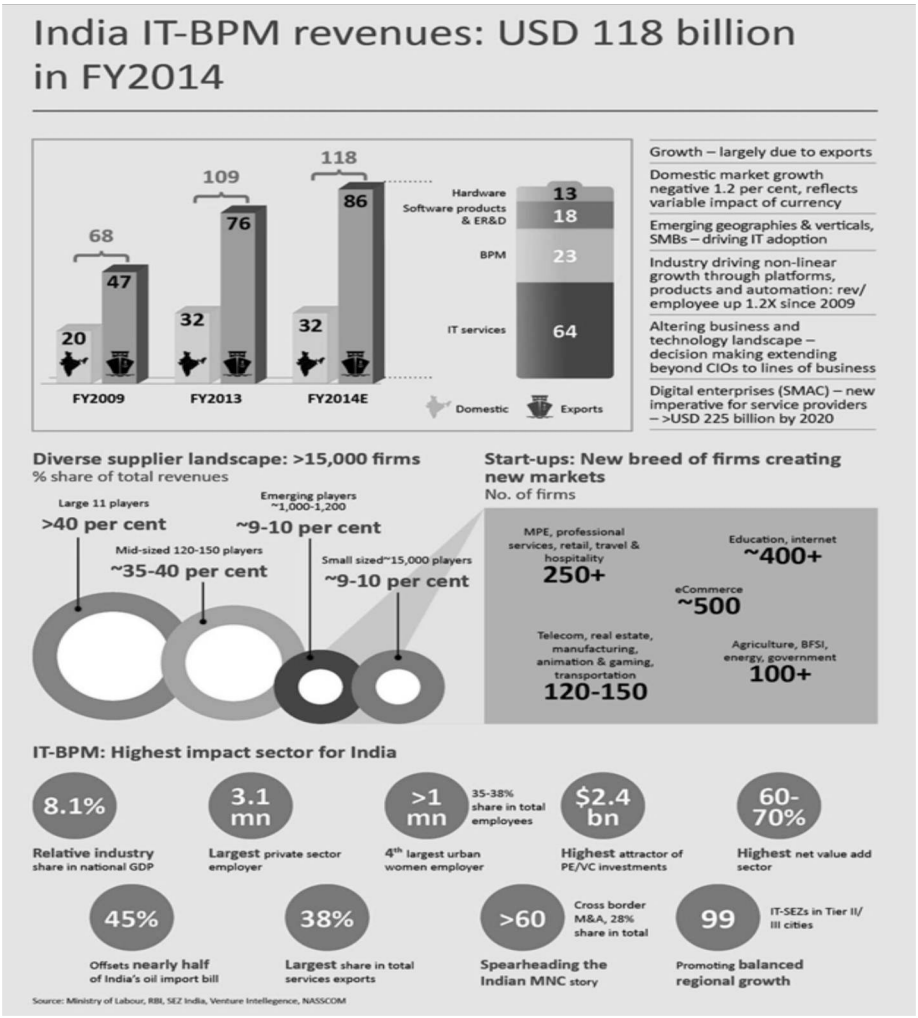
Composition of telephone subscribers in India

The wireless segment (96.9 per cent of total telephone subscriptions) dominates the market, while the wireline segment accounts for the rest.

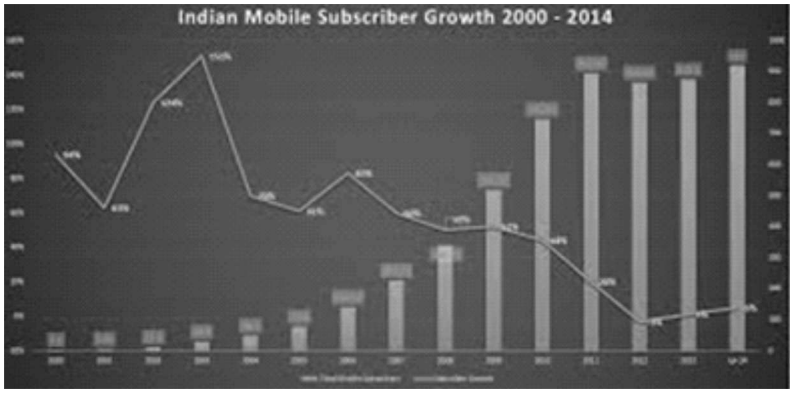


Indian Telecom market

CATEGORIES	2010	2011	2012	2013	2014	CAGR 2010-14
Telecom Services	1,59,519	1,84,207	2,05,454	2,26,741	2,48,956	11.8%
Mobile Phones	50,714	64,077	83,377	1,05,625	1,28,729	26.2%
Total India Telecoms Services & Products Market (Rs. Crore)	2,10,233	2,48,284	2,88,832	3,32,366	3,77,685	15.8%
Total India Telecoms Services & Products Market (USD Billion)	46	54	63	72	82	15.8%



Telecom is one of the fastest-growing industries in India. Today India stands as the second-largest telecommunications market in the world. The mobile phone industry in India would contribute US$ 400 billion in terms of gross domestic product (GDP) of the country in 2014. This sector which is growing exponentially is expected to generate about 4.1 million additional jobs by 2020, as per Groupe Speciale Mobile Association (GSMA).



In the period April 2000 to January 2014, the telecom industry has got in foreign direct investments (FDI) of about US$ 59,796 million, which is an increase of 6 per cent to the total FDI inflows in terms of US$, as per report published by Department of Industrial Policy and Promotion (DIPP).

India's global system for mobile (GSM) operators had 4.14 million rural subscribers as of January 2014, bringing the total to 285.35 million.

Data traffic powered by third generation (3G) services grew at 146 per cent in India during 2013, higher than the global average that saw usage double, according to an MBit Index study by Nokia Siemens Networks (NSN).

India's smartphone market grew by 171 per cent in 2013, to 44 million devices from 16.2 million in 2012, as per research firm IDC India. The increasing popularity of bring-your-own-device (BYOD) in the workplace is further adding momentum to the smartphone market.

Indian telecom industry has grown from a tele-density of 3.58% in March 2001 to 74% in June 2013. This great leap in both number of consumers as well as revenues from telecom services has not only provided sufficient contribution in Indian GDP growth but also provided much needed employment to India youth.

Players in the market

BSNL is the market leader with a 67.7 per cent share followed by MTNL with 11.5 per cent market share. Next is Bharti Airtle at 10.9% followed by Tata and Reliance at 5% and 4.1% respectively.

BSNL as a company is growing and showed annual revenues of approximately $4.5 billion as of 2014. BSNL is serving more than 125 million customers across the country and is catalyst in checking the price point for telecom services.

Also, with the government intensifying its rural focus, only BSNL can turn into reality the next wave of rural telecom penetration.

"Vodafone is investing nearly US$ 3 billion over the next two years in India in expanding its network infrastructure and distribution channel in the country," as per Vittorio Colao, CEO, Vodafone Plc.

BlackBerry plans to set up enterprise solutions centres to educate corporate customers about various BlackBerry Enterprise Service (BES) 10 solutions. "India is one of the fastest growing markets in terms of smartphone and mobile data adoption," said according to Sunil Lalvani, Managing Director (MD), BlackBerry India.

Tata Teleservices plans to set up nearly 4,000 wi-fi hotspots in nine cities across the country in the next two years.

Government Initiatives

The government has fast-tracked reforms in the telecom sector and plans to clear the proposal allowing spectrum trading and sharing ahead of the year-end deadline as it wants to lift the business sentiment for the forthcoming airwave auction. Some of the other major initiatives taken by the government are as follows:

- The Government of Uttar Pradesh (UP) has secured investment deals valued at Rs 5,000 crore (US$ 804.64 million) for setting up mobile manufacturing units in the state.
- The Government of India plans to roll out free high-speed wi-fi in 2,500 cities and towns across the country over the next three years and the programme, involving

an investment of up to Rs 7,000 crore (US$ 1.12 billion), will be implemented by state-owned Bharat Sanchar Nigam Ltd (BSNL).

- Citizens of India are expected to get a minimum of 2 megabits per second (MBPS) Wi-Fi speed at every government owned service point such as railways stations, airports, bus stops, hospitals and all government departments that deal with the public on a daily basis.
- The Union Cabinet of India has approved the largest ever telecom spectrum auction that is targeted to fetch at least Rs 64,840 crore (US$ 10.43 billion). The government will sell 380.75 megahertz (MHz) of second generation (2G) spectrum in three bands—the premium 900 MHz, 1800 MHz and 800 MHz.
- To speed up the national optical fibre network (NOFN) project, the Department of Telecommunications (DoT) has advised officials to use public buildings such as post offices, railway stations and schools.
- The Government of Kerala has decided to allow mobile telecom service providers to set up towers on government land and buildings. This is the first time that a State Government has opened its own land, buildings and offices to mobile companies.

Road Ahead

India will emerge as a leading player in the virtual world by having 700 million internet users of the 4.7 billion global users by 2025, as per a Microsoft report.

Opportunities

The telecommunications industry as a whole offers a number of attributes that are difficult to ignore from the standpoint of investors.

- *Telecommunications is a necessary utility:* The need for telecom in both rural and urban areas, and its role in the infrastructure of both developed and developing markets, will continue to grow. In addition, economic stimulus plans in the U.S. and throughout the world should boost the performance of select service providers and equipment manufacturers.
- *Barrier to Entry:* The lack of public airwaves (spectrum) in the telecommunications industry creates a high barrier to entry. The U.S. telecom market is controlled by just four national players, as regional low-cost operators are not eligible to compete with large carriers. Furthermore, it is not easy to establish a new telecom carrier since it will require government approval to transmit voice, data, and video on public airwaves. Spectrum licenses are limited and therefore quite expensive. Moreover, the deployment of network infrastructure requires significant capital expenditure, which very few entities can afford. Thus, this barrier protects the profits of incumbents.
- *Strong Demand:* A recovering economy speeds up the demand for real-time voice, data and video manifold. The escalation in demand has encouraged telecom service providers to undertake large network extensions while upgrading plans. Moreover, the FCC projects mobile data demand to grow 25-50 fold over the next five years.

WEAKNESSES

In general, the telecommunications companies that are under pressure have high debt levels and large financial leverage ratios or are unable to cope with the recent market trends. Other risks that remain are as follows:

- *Potential Business Slowdown:* Sales fluctuations of carriers are expected to continue to weigh on capital spending decisions -- a major problem faced by equipment vendors. The companies are expected to remain focused on improving their balance sheets, financial discipline and free cash-flow generation.
- *Product Overlapping:* We may see more product sharing deals between telecom, cable TV and satellite TV operators as each of these players are trying to gain a foothold in each other's territory. Even pay-TV services, offerings to business enterprises, and mobile backhaul and metro-Ethernet segments may witness more convergence. While mobile phone makers are now gradually offering tablets (small laptops), chipset manufacturers -- who provide chips for personal computers and mobile phones -- frequently interchange their areas of operations.
- *Increased Competition:* Technological upgrades and breakthroughs have resulted in cutthroat price competition. Product life-cycle and upgrade-cycle have been reduced drastically as several firms are introducing new products and services within a short span of time. Increasing competition is forcing every player to offer heterogeneous and bundled services.