



هيئة تنظيم الاتصالات
Telecommunications Regulatory Authority
مملكة البحرين - Kingdom of Bahrain

Telecommunications Markets Indicators in the Kingdom of Bahrain

Full year and 2016 up to Q2 2017

October 2017



Content

	Page
Introduction	3
Disclaimer	4
Key market trends and observations	5
Services offered by active operators	6
Main telecoms indicators	7
Revenues in the telecom sector	8
Employment in the telecom sector	9
Fixed telephony services	10
Mobile services	15
International outgoing minutes	25
Broadband services	33
Leased line services	39
Benchmarking	43



Introduction

The collection, analysis and dissemination of accurate and timely market information significantly enhances the design of effective, proportionate and efficient market regulation.

The publication of this report is in accordance with Article 54 of the Telecommunications Law of Bahrain.

Unless specified, the analysis presented in this report is based on data collected from licensed operators by TRA. TRA would like to thank licensed operators for the information provided and looks forward to their continued collaboration in the future.

When publishing such information, TRA must have regard to the need to exclude any information which relates to the private affairs of a Person¹ and information which, if published, would or might in the opinion of TRA seriously and prejudicially affect the interests of any Person. TRA has taken the necessary steps to ensure that it complies with the requirements of Article 54, including not publishing information which may be considered confidential information².











This is the twelfth Telecommunications Markets Indicators Report and it covers a large range of telecoms services indicators up to Q2 2017 such as the number of subscribers, penetration rates, calls usage and telecoms revenues.

¹ Note that Person is defined in the Telecommunications Law to mean any natural or artificial person or public authority.

² See TRA's position paper on its treatment of confidential and non-confidential information at http://www.tra.org.bh/en/pdf/Confidentiality_Guidelines_Final.pdf



Disclaimer

-  This report contains information collected by the Telecommunications Regulatory Authority in Bahrain in accordance with the provisions of the Telecommunications Law. This report fulfills the requirement to undertake research and publish information as set out in Article 54 of the Law. It also fulfills the requirements of Article 25 of the Law to provide information to the Regulator as set out in the Individual Licenses granted to the Operators mentioned in this report.
-  This report is not a binding legal document and also does not contain legal, commercial, financial, technical or other advice.
-  The Telecommunications Regulatory Authority in Bahrain does not make any representations or warranties, either express or implied, that:
 -  the information is free from inaccuracies, errors or omissions;
 -  the information is exhaustive;
 -  the information is of merchantable quality and fitness for any particular purpose.
-  TRA, including its officers, board members, employees, agents and contractors, is not liable for:
 -  any inaccuracy, error or omission in the information contained in this document; nor
 -  any loss, damage, cost or expense whether direct, indirect, consequential or special, incurred by, or arising by reason of, any person using or relying on the information and whether caused by reason of any inaccuracy, error, omission or misrepresentation in the information or otherwise.
-  The Telecommunications Regulatory Authority is not bound by it, nor does it necessarily set out the Authority's final or definitive position on particular matters. To the extent that there might be any inconsistency between the contents of this document and the due exercise by it of its functions and powers, and the carrying out by it of its duties and the achievement of relevant objectives under law, such contents are without prejudice to the legal position of the Authority. Inappropriate reliance ought not therefore to be placed on the contents of this document.

Key Indicators

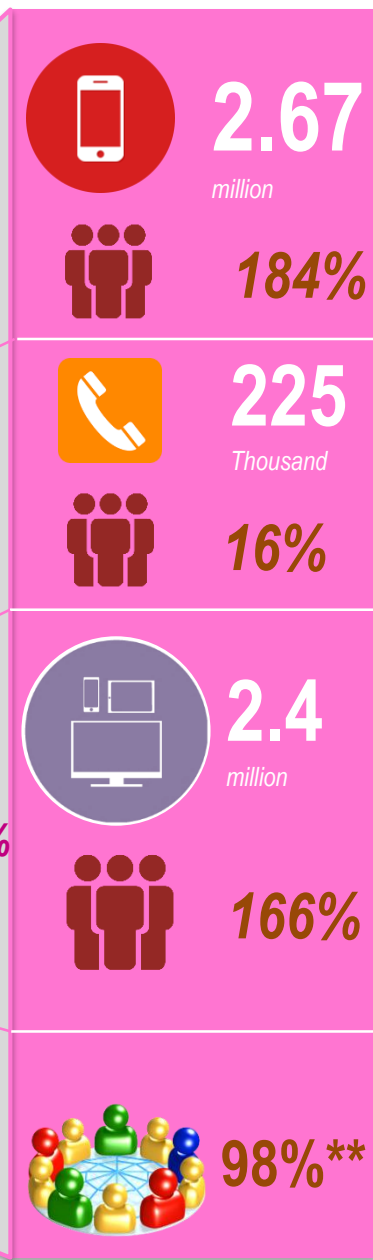
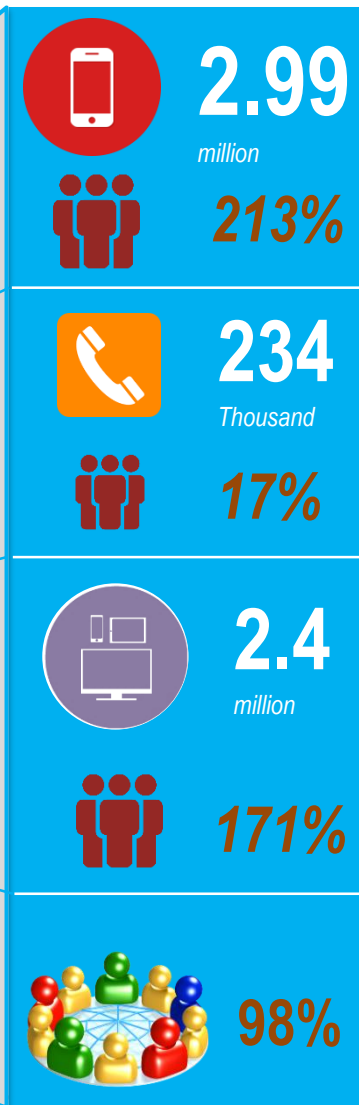
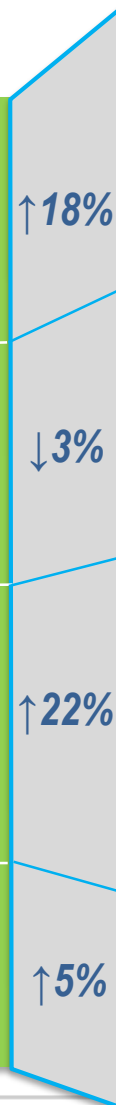
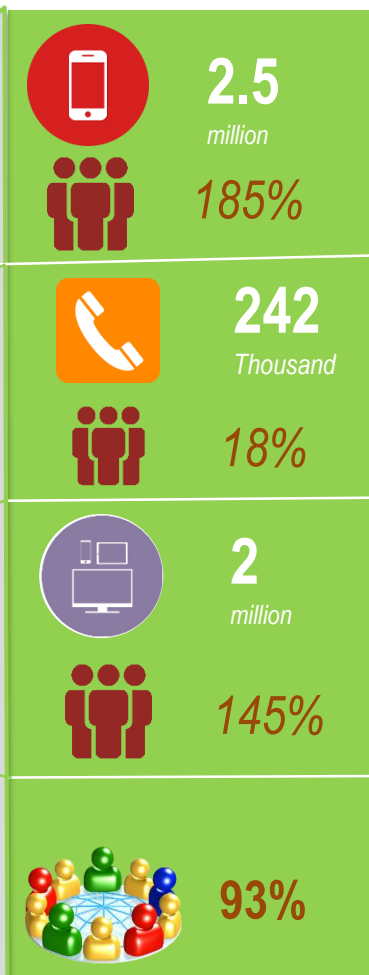
2016

Q2 2017*

2015

2014

Internet users
Broadband
Fixed telephone
Mobile



* In 2017 population increased from 1,404,900 to 1,451,200

** Based on 2016 survey

Penetration rate

Services offered by active operators

Operator Name	National Fixed	International Calls	Mobile	Internet	Leased line	Other data service	Others
Ascentech telecoms		✓					
Batelco	✓	✓	✓	✓	✓	✓	
Bahrain Internet Exchange						✓	IP Transit –Peering – Colocation - Lawful Intercept - Number Portability- IPLC
Bahrain Broadband Company	✓	✓		✓			
BT Solutions LTD					✓	✓	
Equant Global Network - EGN BV					✓		IPVPN
Etisalatcom Bahrain Company	✓	✓		✓	✓		
Gateway Gulf Company				✓			Data Center Co-location & Services Provider
Golden Sands Electronic and Phone							Bulk SMS
Gulf Electronic Tawasul Company					✓		
IMC							International calls through wholesale
Infonas	✓	✓		✓	✓	✓	
Kalaam telecom	✓	✓		✓	✓		
Mada Communication Company					✓		
Menatelecom	✓	✓		✓	✓	✓	
Mobile Information Services							Premium SMS
Mobitel Communication							Value added services
Moving Gulf Telecom		✓					
Northstar Technology Company		✓		✓	✓		
Nuetel Communications	✓	✓		✓	✓		Microwave
Orbit Data Systems Company				✓			VSAT
Rapid telecoms	✓	✓		✓	✓	✓	
Sita						✓	
Viacloud	✓	✓		✓	✓		
Viva Bahrain	✓	✓	✓	✓	✓		
Zain Bahrain	✓	✓	✓	✓	✓	✓	
Zajil					✓		

Main telecom indicators

Indicator	2008	2009	2010	2011	2012	2013	2014	2015	2016	Growth 2015-2016	CAGR 2008 – 2016
Number of fixed line telephony	220,386	237,621	227,353	248,479	260,000	251,000	247,000	242,000	234,000	(3%)	1%
Fixed line telephony penetration	20%	20%	19%	21%	21%	20%	19%	18%	17%		
Total mobile subscribers	1,440,782	1,401,974	1,567,745	1,693,650	2,123,903	2,210,190	2,322,860	2,533,208	2,994,865	18%	10%
Mobile penetration	130%	119%	128%	142%	172%	173%	176%	186%	213%		
Total broadband subscribers	114,502	161,815	306,235	567,884	1,148,264	1,507,956	1,679,681	1,983,617	2,407,837	22%	46%
Broadband penetration	10%	13%	25%	48%	93%	118%	128%	145%	171%		
Percentage of individuals using the Internet	52%	53%	55%	77%	88%	90%	91%	93%	98%		
Telecommunications revenues (BD in million)	303	338	360	406	409	423	430	450	430	(4%)	4%
Number of employees in the telecommunications sector	2469	2504	2584	2708	3141	3000	3,092	3206	3230	1%	3%

Notes:

1- The number of subscribers refers to the end of the period.

2- Number of broadband subscribers include fixed wired, wireless and mobile.

3- The total number of broadband subscriptions have been revised during 2017 due to the revision of broadband subscriptions reported by an operator.

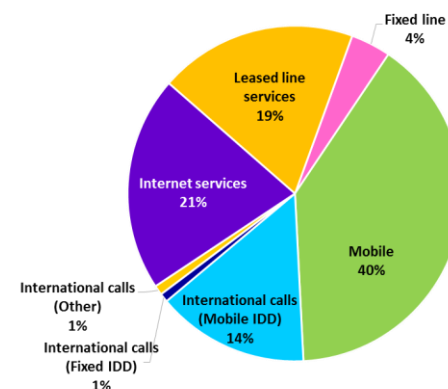
4- The source of Percentage of individuals using the Internet is the ITU and TRA residential survey.

5- Penetration is based on mid-year population estimated by CIO

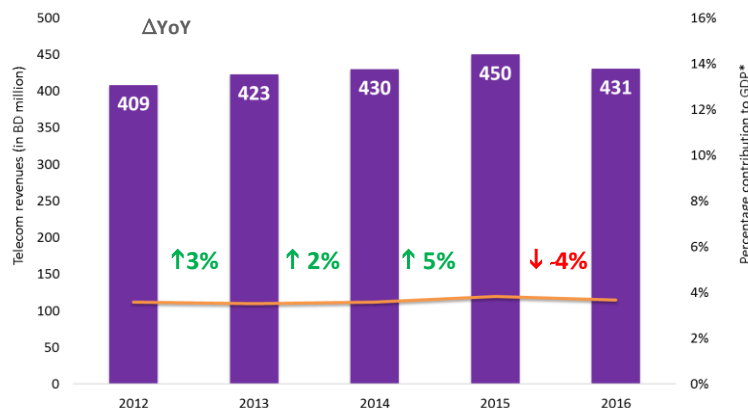
Revenues in the telecom sector

- Telecommunication services generated BD 430 million in revenue in 2016 compared to BD 450 million in 2015 a decline of (4%). With CAGR of 13% from 2012 to 2016.
- Telecommunication sector revenues represent about 4% of the GDP as of 2016.
- The proportion of mobile revenue increased to reach 40% in 2016, comparing to 38% in 2015, despite the decrease in the overall revenue, and the mobile revenue specifically.
- Mobile services revenue account for more than half of the telecom retail services revenue (As it reached 54% if we include revenues generated from international calls using Mobile).

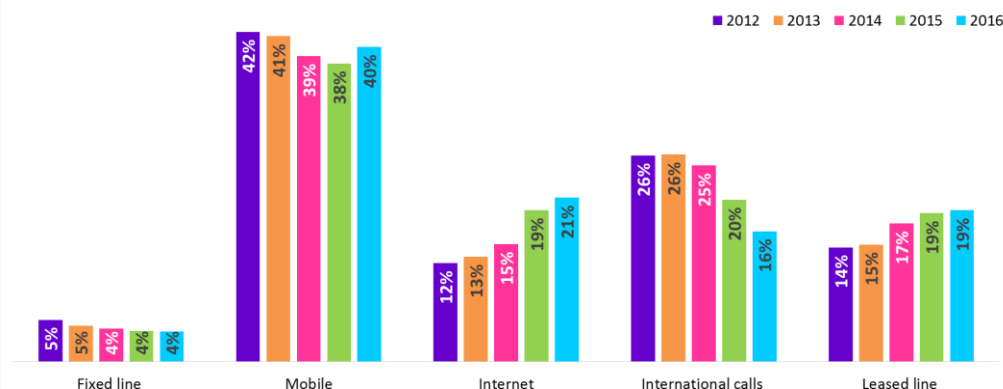
Break down of retail services revenue in 2016



Telecom sector revenues (in BD million)

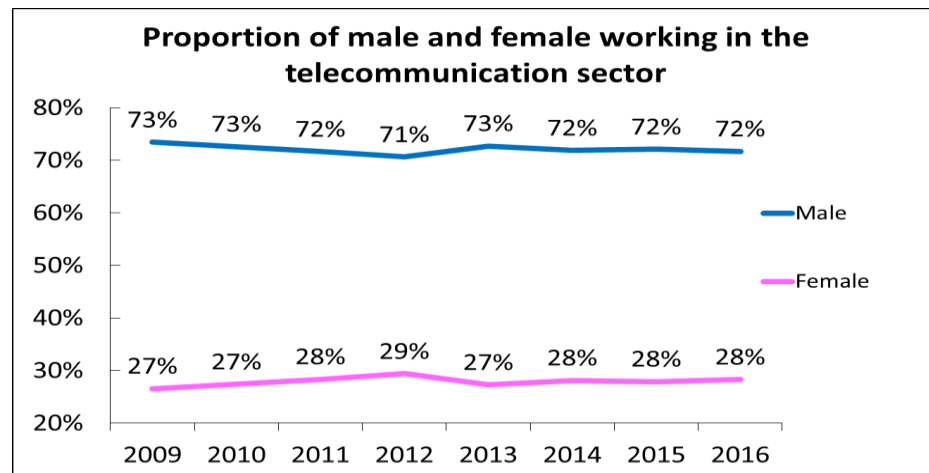


Evolution of retail services revenues by segment

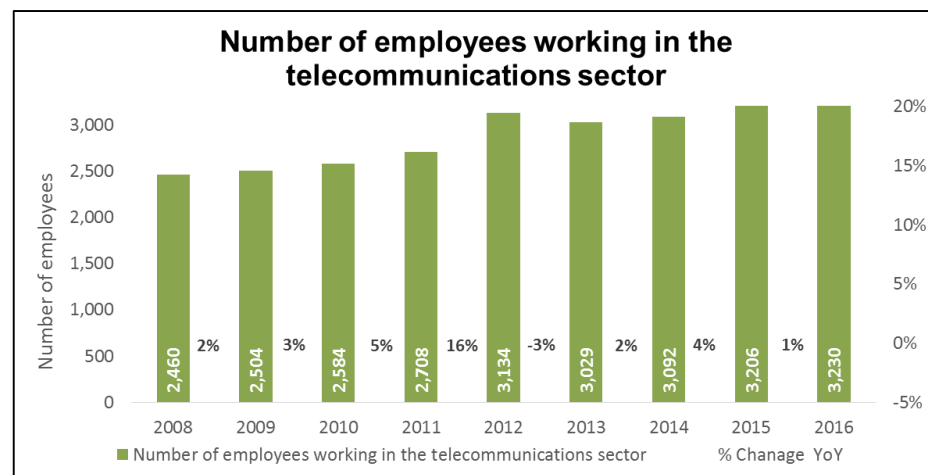
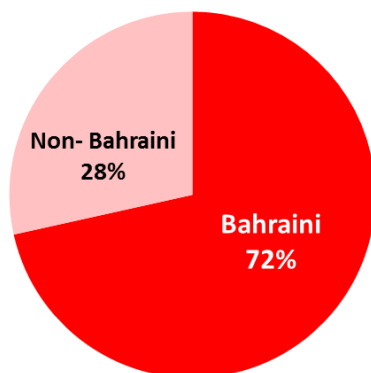


Employment in the telecom sector

- 3,230 employees are working in the telecommunication sector in 2016.
- The sector achieves high degree of Bahrainisation (72% as of 2016).
- The females are representing 28% of employees in the telecom sector.



Distribution of employees by nationality 2016



Fixed line telephony services

End of H1 2017



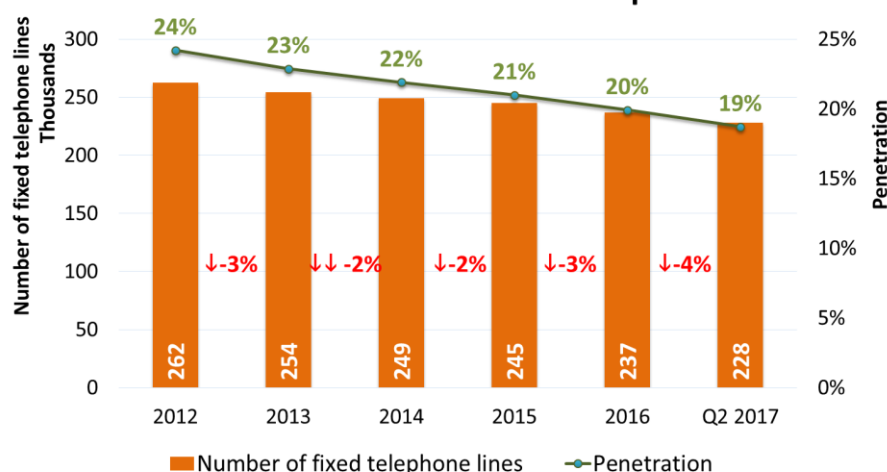
225,270 Number of total fixed lines

16% Penetration rate

271,520 Number of fixed lines, including ISDN

19% Penetration rate

Evolution of fixed line telephone



There were 225,270 fixed-line telephony services in operation at the end of H1 2017, compared to 233,415 fixed telephone lines in services at the end of H1 2016 a net decrease of (3%).



ISDN voice channel equivalents are included in the penetration rate. Basic-rate voice-channel equivalents is the number of basic-rate ISDN subscriptions multiplied by 2, and primary-rate voice-channel equivalents is the number of primary-rate ISDN subscriptions multiplied by 30.



Number of	2012	2013	2014	2015	2016	H1 2017
ISDN	2,709	2,639	2,610	2,560	2,591	2,615
Basic-rate	1,504	1,398	1,324	1,206	1,139	1,150
Primary-rate	1,205	1,241	1,286	1,354	1,452	1,465

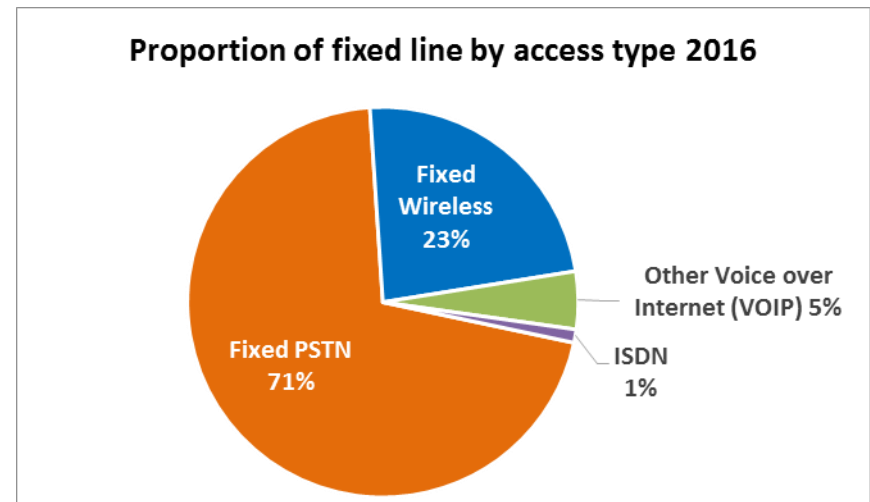
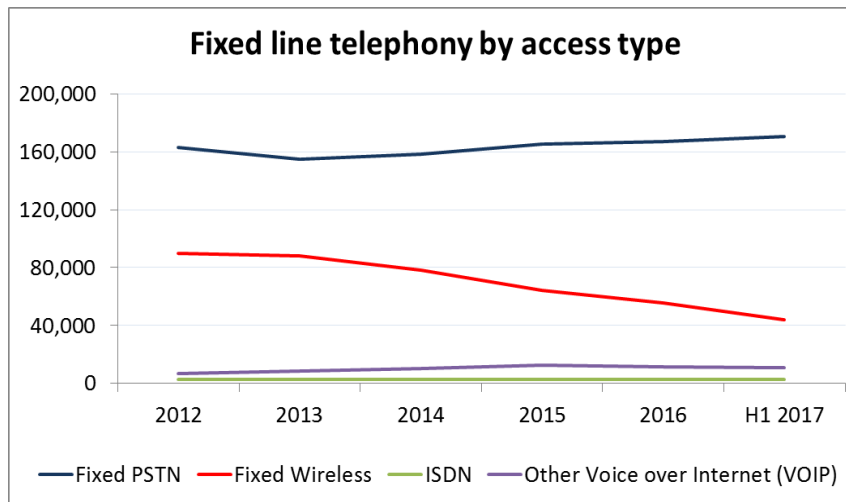
* Including ISDN subscribers

** Number of ISDN is estimated for H1 2017

Fixed line telephony by access type



-  The number of fixed wired telephony services increased by almost 3% at the end of H1 2017 comparing to the end of H1 2016, as the increase demand on fiber was contrasted by decreasing demand on VOIP services.
-  The number of fixed wireless telephone services continue in falling, it decreased by almost -21% over the same period.

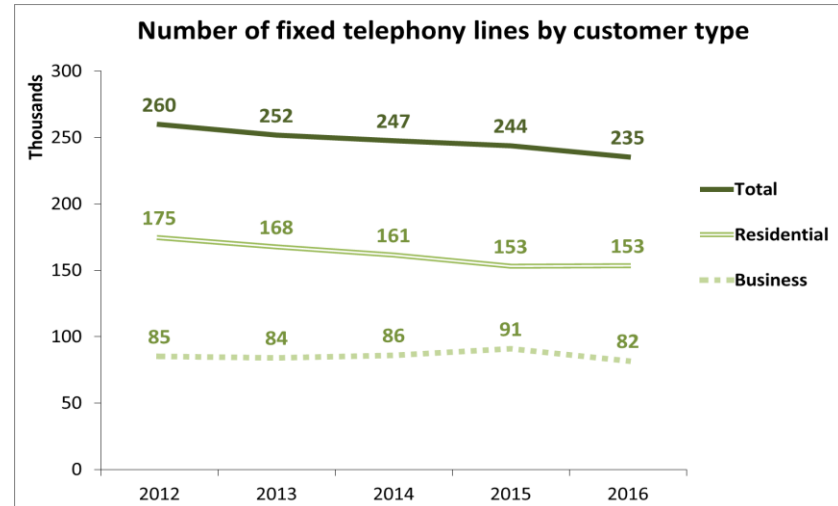




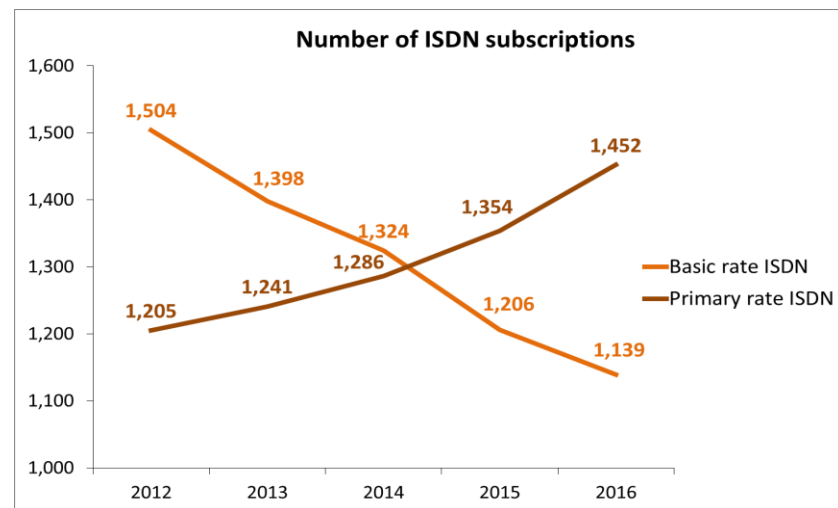
Fixed line telephony services by customer type



The reduction in the total number of fixed telephony lines in 2016 mirrors the reduction in business services, as the total number of residential lines remained unchanged at 153 thousands while business lines decreased by 10% to 82 thousands. (35% and 65% of the total respectively).



By the end of 2016 there were increase in Primary rate ISDN services by 7% to reach 1,452 while the Basic rate ISDN decreased by 6% to reach 1,139.

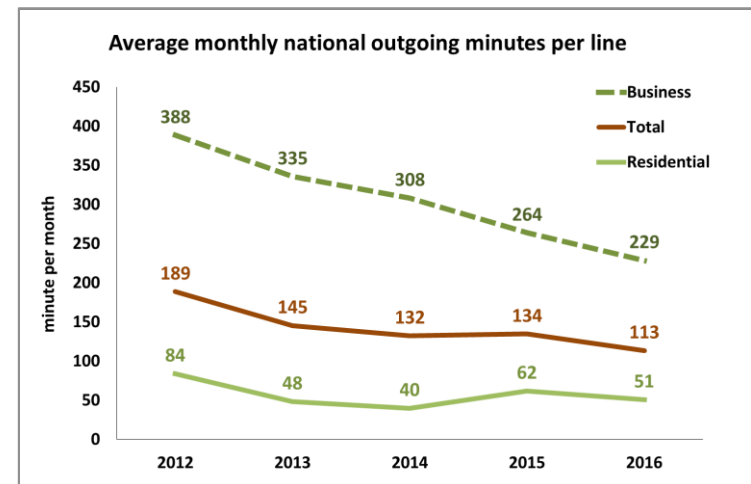
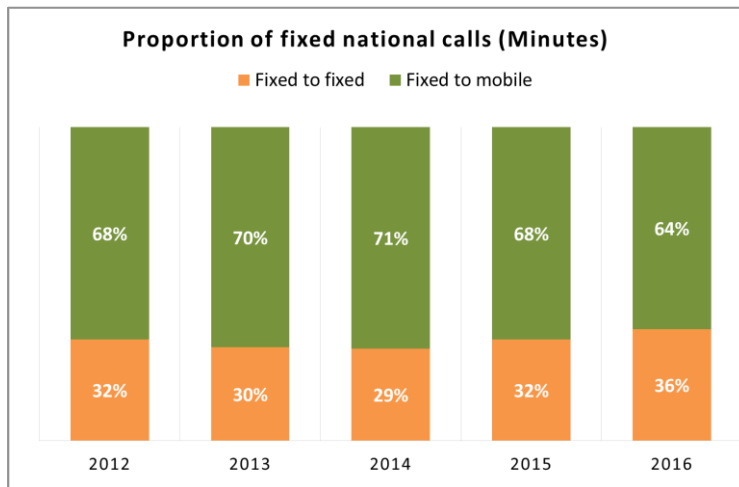
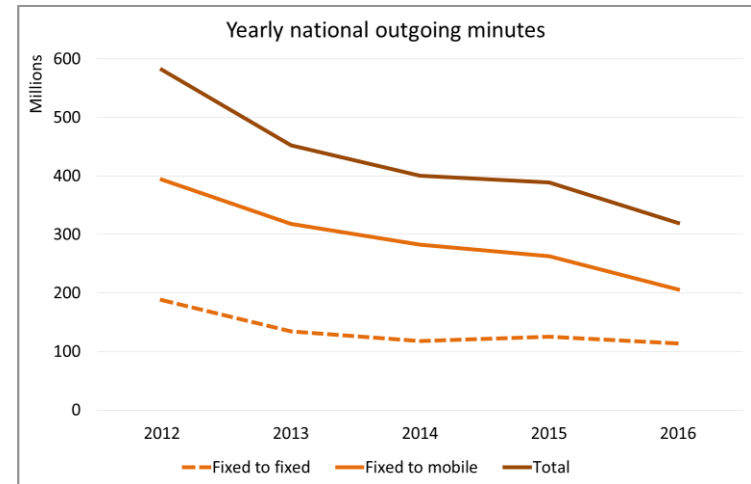




Fixed line telephony outgoing minutes

The outgoing fixed call minutes fell by (18%) from 388 million to 320 million minutes in 2016 as consumers increasingly used mobile and internet based voice and messaging services instead of fixed line telephony calls.

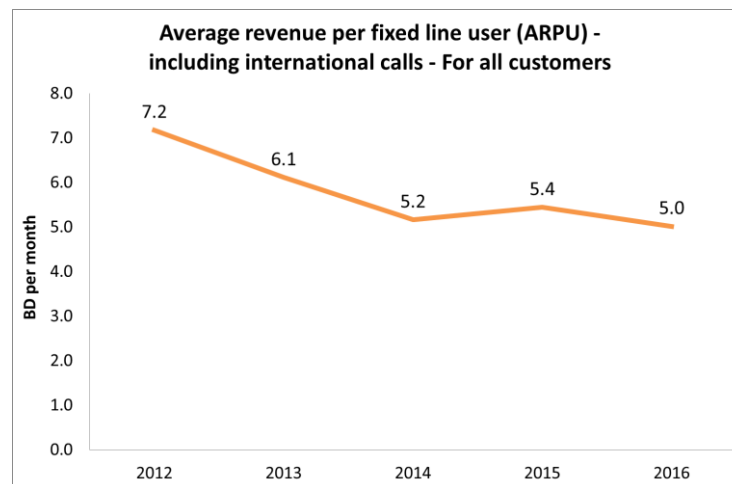
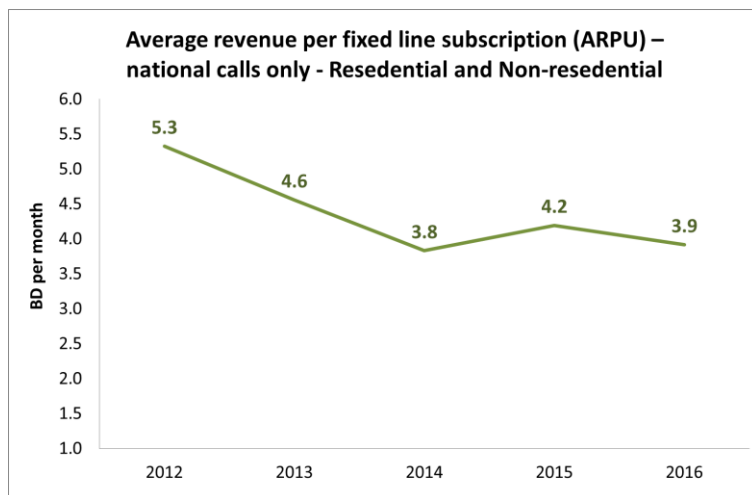
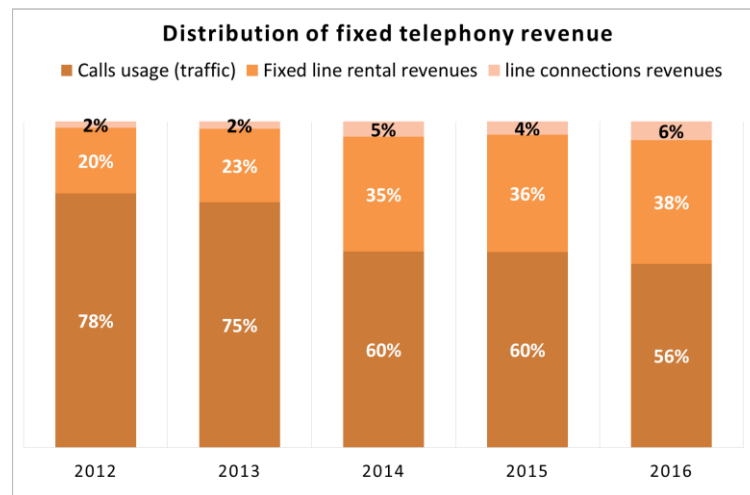
64% of national traffic originated from fixed lines are fixed-to-mobile calls.



Fixed line telephony service revenue



Fixed line revenues dropped by (9%) between 2015 and 2016, the main driver of this was due to decline of call traffic and fixed line rental revenue. On the other hand the line connection revenue has increased to reach 6% of total fixed line telephony revenue that is mainly due to increase in demand for new fiber connections.



Mobile services

End of H1 2017



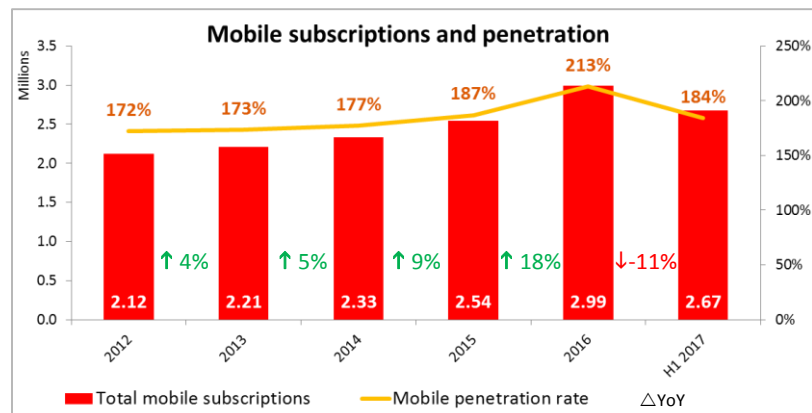
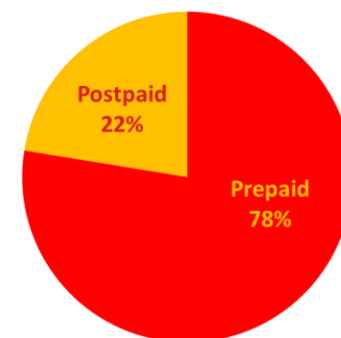
2,674,533 Number of total mobile subscriptions

184% Penetration rate

78% Percentage of prepaid subscriptions

- At the end of 2016, penetration reached a new heights. This is due mainly to unlimited data offers by operators for both pre-paid and post-paid packages.
- At the end of H1 2017 we saw a decline in the penetration rate due to the increased population* denominator and as operator removed most of the unlimited data offers.
- At the end of Q2 2017 there were about 2.67 million mobile subscribers in Bahrain, a decreased of (5%) compared to Q2 2016, 2.8 million mobile subscriber with penetration rate of 201% .

Proportion of prepaid and postpaid subscriptions as of H1 2017



	2012	2013	2014	2015	2016	H1 2017	Semi-annual CAGR H2 2012-H1 2017
Total	2,123,903	2,210,190	2,328,994	2,541,688	2,994,865	2,674,533	2.59%
% of Prepaid	81%	80%	78%	78%	81%	78%	2.1%
% of Postpaid	19%	20%	22%	22%	19%	22%	4.5%

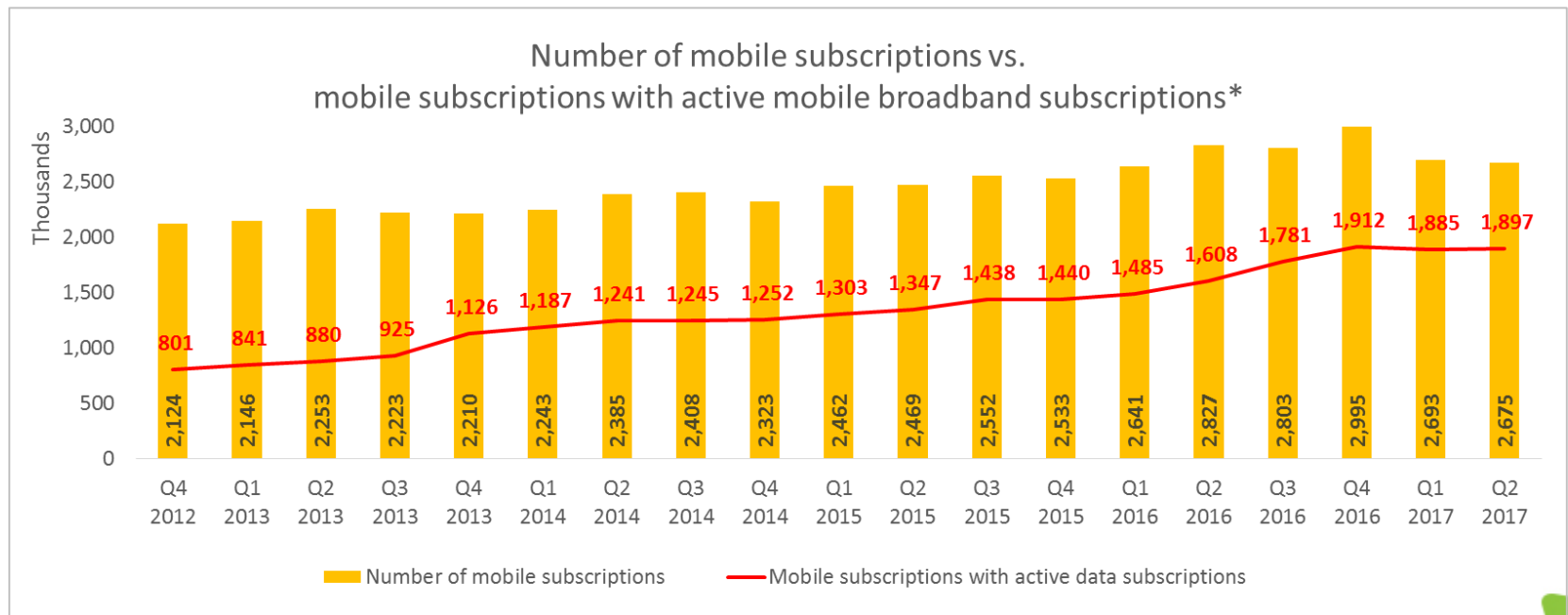
*Mid-year population estimated by CIO

2016	1,404,900
2017	1,451,200



Mobile subscriptions having data subscriptions

- At the end of H1 2017, there were 1.9 million mobile subscribers with mobile data subscription (pay per use, add-on and bundles) compared to 800,000 in 2012 (increase by 89%).
- Active mobile broadband subscriptions (pay per use, add-on and bundles) represent 71% of total mobile subscriptions at the end of Q2 2017 compare to 64% of total mobile subscriptions at the end of Q4 2016.

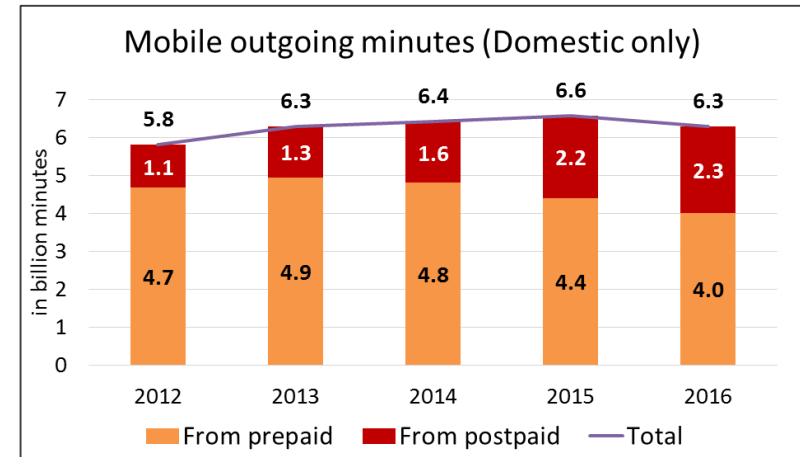


*(Pay per use, Add-on and Bundles)

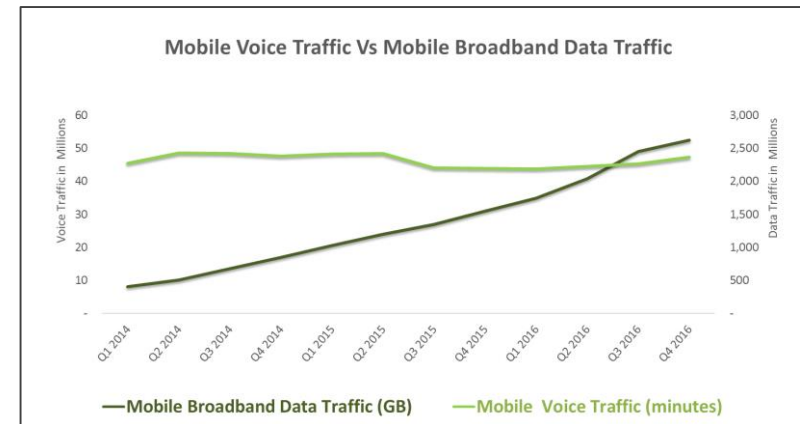
Mobile traffic



- At the end of 2016, mobile generated 6.3 billion domestic minutes, representing a reduction of (4%) comparing to the pervious year 2015.
- The compound annual growth rate is 2% in domestic mobile originated traffic between 2012 and 2016.
- Comparing 2016 to 2015, the domestic postpaid mobile outgoing minutes grew by 5%, while the traffic originated from prepaid dropped by (9%).



- The mobile broadband subscribers consumed almost 177 petabyte of data during 2016, up 73% from 2015 as they have consumed 102.5 petabyte only during that year, that while the mobile voice traffic is declining as it decreased by (2%) over the same period, from 9,244 million minutes during 2015 to 9,032 million minutes during 2016.



Mobile traffic

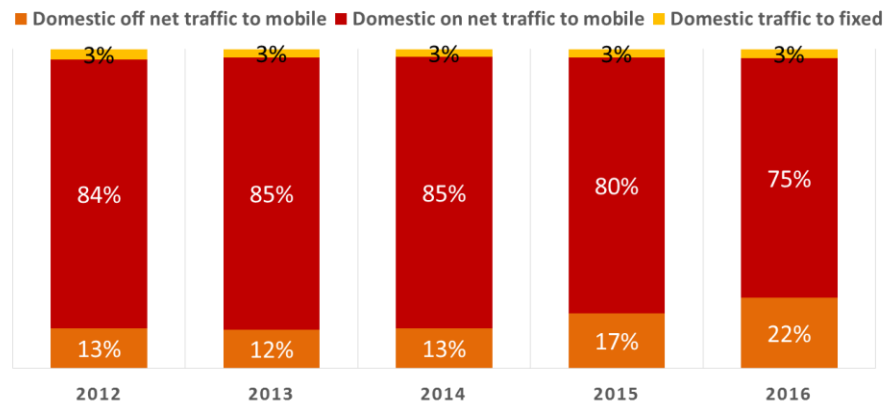


In 2016, domestic mobile originated on-net traffic decreased further to reach 75% comparing to 80% in 2015.

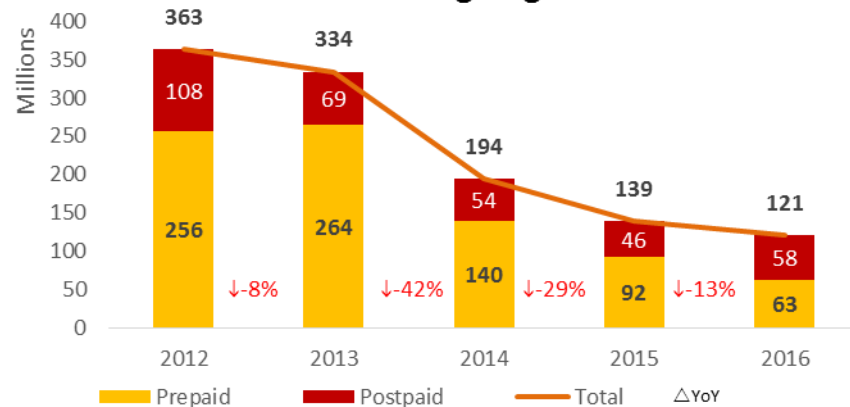
On 2016 the off-net voice traffic has increased further to reach 22% comparing to 17% during 2015, one driver of this increase is the new mobile packages that were introduced during the year which offered free off-net minutes.

Increasing use of over-the-top (OTT) services/applications (e.g. WhatsApp) has led to decline in total SMS as it dropped by (13%) between 2015 to 2016 mainly due to the increase in mobile data services/applications (e.g. WhatsApp).

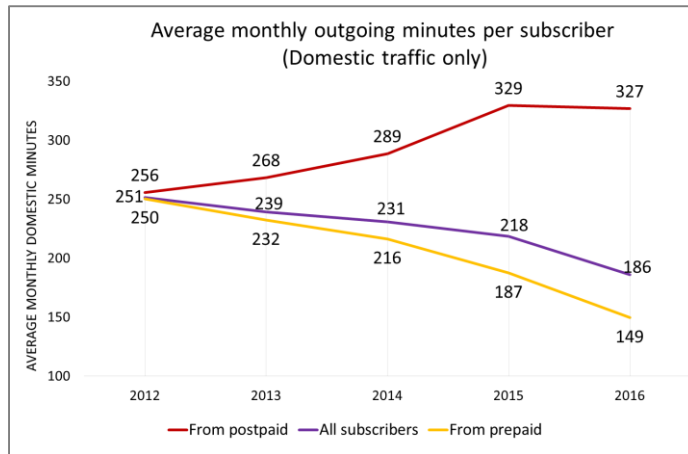
Distribution of domestic mobile outgoing minutes



Domestic outgoing SMS



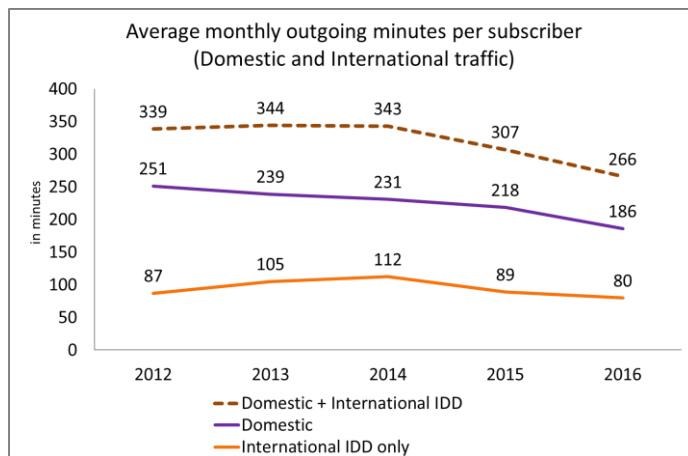
Mobile average monthly outgoing minutes



As shown in the figure the average monthly domestic traffic (in minutes) for postpaid subscribers decreased from 329 minutes in 2015 to 327 minutes in 2016, a decrease of (1%)



The average monthly domestic traffic (in minutes) for prepaid customers dropped further from 187 minutes in 2015 to 149 minutes in 2016, a drop of (20%)

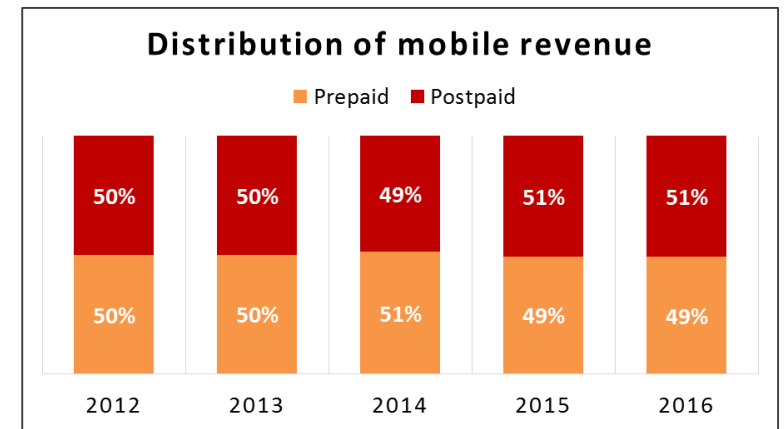
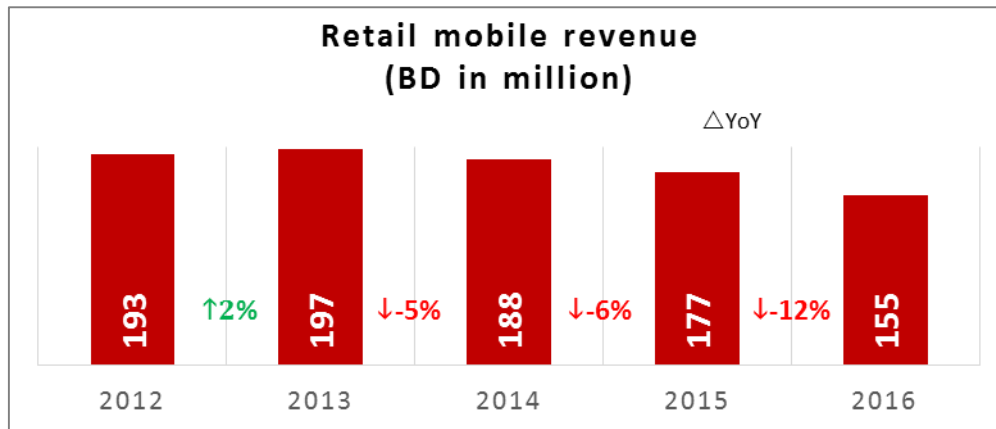
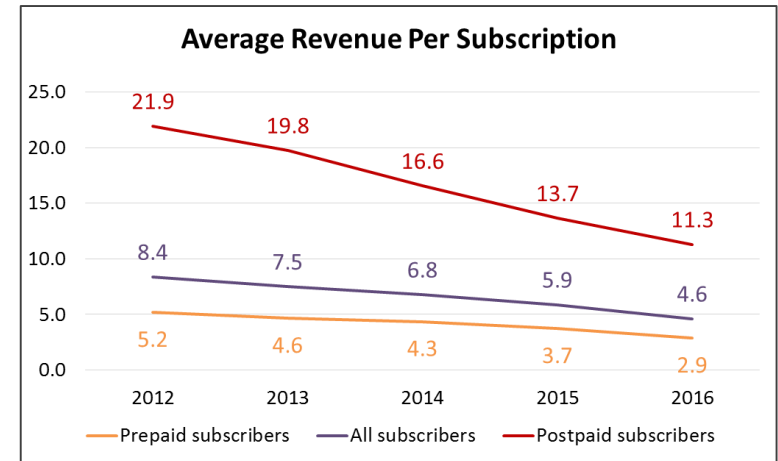


The average monthly volume of international direct dial (IDD) calls has decreased by (10%) between 2015 and 2016.

Mobile revenue



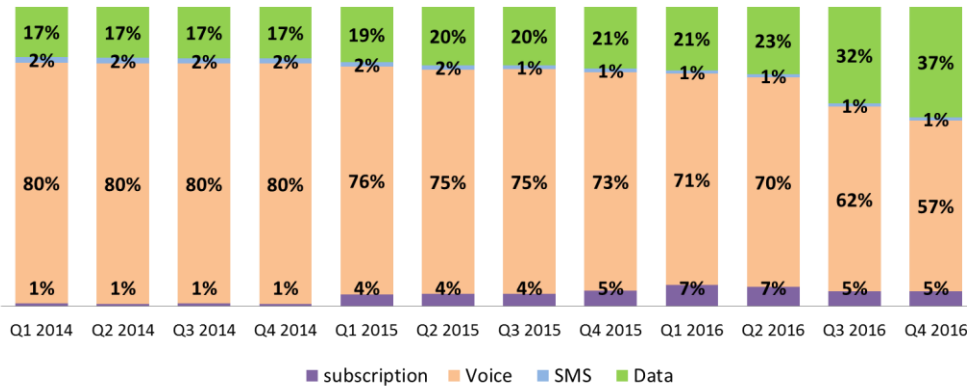
- Mobile revenues dropped by (12%) between 2015 and 2016.
- Although postpaid mobile subscriptions represent 19% of total mobile subscriptions, however, the revenue generated from postpaid mobile subscriptions represent 51% of the total retail mobile revenue in 2016.
- The reduction in mobile service prices resulted in a drop in the average revenue per subscription by (47%) for postpaid and (44%) for prepaid in the last five years (From 2012).



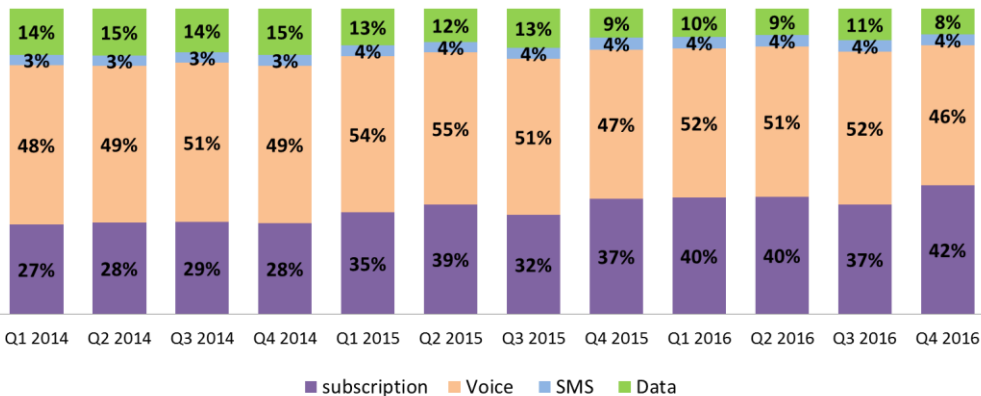
Distribution of mobile revenue



Distribution of mobile revenue - Prepaid



Distribution of mobile revenue - Postpaid



Voice services continue to be the main source of revenues for mobile operators, despite the decrease of voice revenues, followed by data which exhibited a continuing increase.

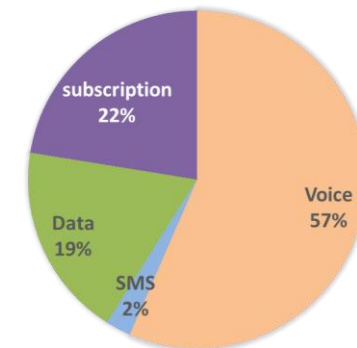


For prepaid, voice generated about 57% of prepaid revenues whereas data generated 37% in Q4 2016.



For postpaid, voice generated about 46% of postpaid revenues followed by subscription which represented 42% in Q4 2016.

Distribution of mobile revenue (prepaid+postpaid) - 2016





Mobile Average spend per subscriber per month



During Q4 2016, prepaid subscribers spent BD 2.6 monthly for their subscription, phone calls, SMS and data, comparing to BD 3.6 was spent on the same services during Q4 2015.



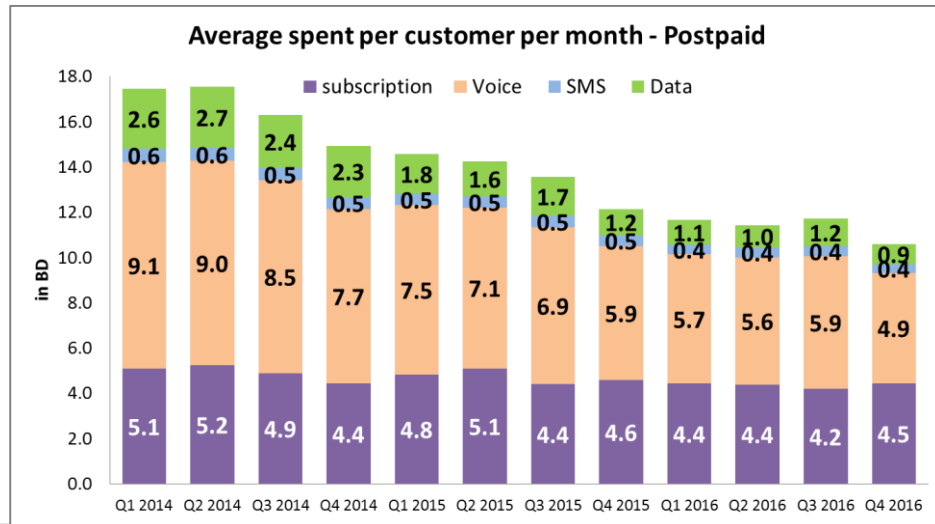
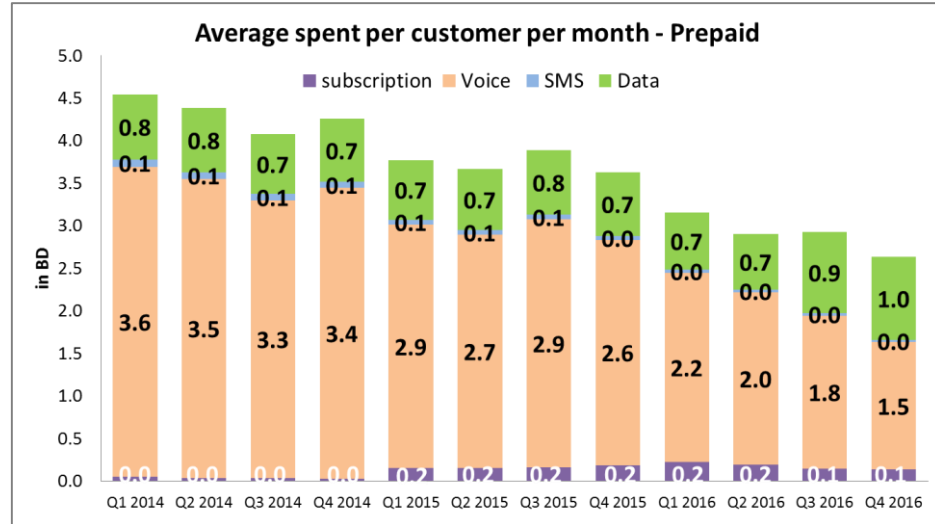
While during Q4 2016 postpaid subscribers spent BD 10.6 monthly for the same services comparing to 12.1 during Q4 2015.



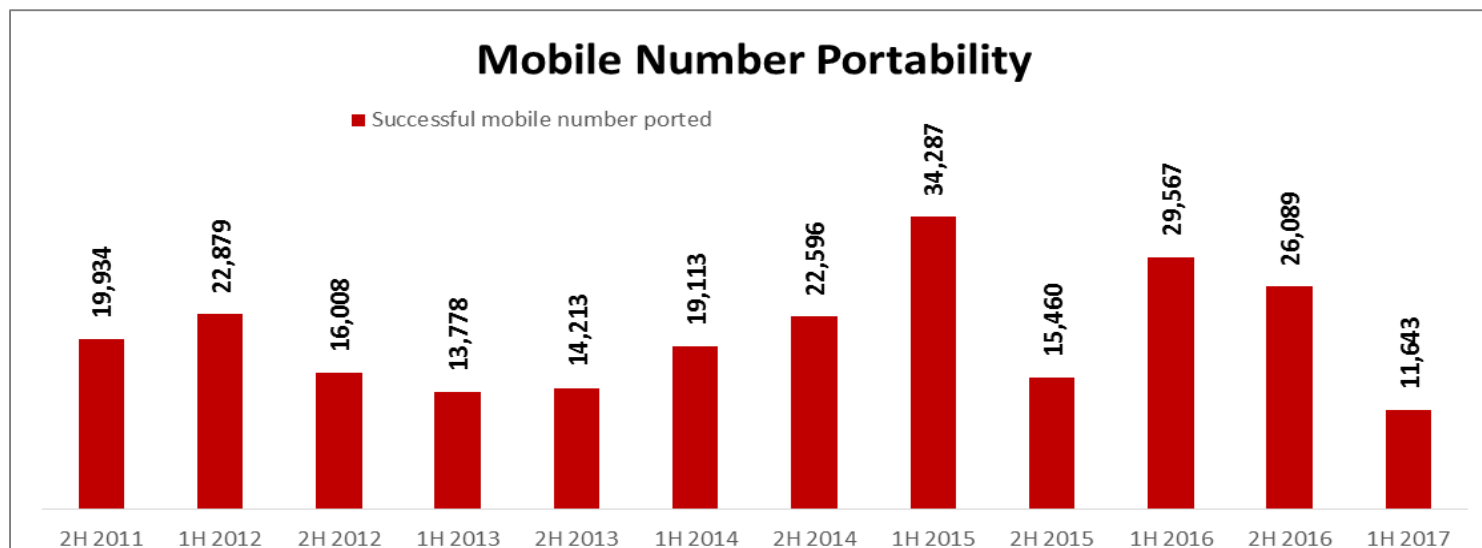
the average monthly spend per subscriber for voice decreased from BD 2.6 during Q4 2015 to BD 1.5 during Q4 2016 for prepaid subscribers.





During Q4 2016, the average monthly spend per prepaid subscriber for data is about BD 1 an increase of 30% comparing to Q4 2015. whereas the average monthly spend per postpaid subscriber for data decreased by (23%) to reach BD 0.900 comparing to BD 1.2 during Q4 2015.



Mobile number portability



 The volume of mobile numbers successfully ported has gradually increased. By the end of H1 2017, a total of approximately 245,567 mobile numbers had been ported successfully since the introduction of number portability in July 2011.

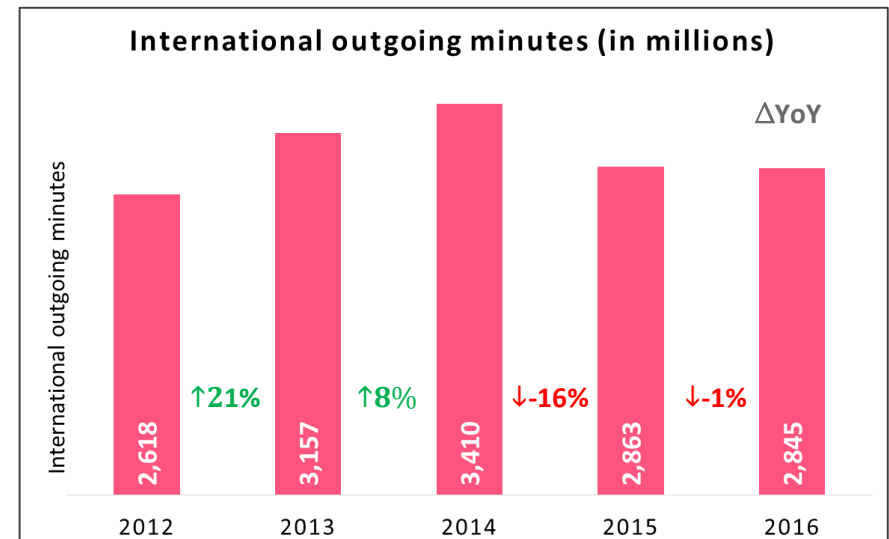
 During first half of 2017, the successful mobile number ported were 11,643, the lowest since the introduction of mobile number portability in Bahrain.

International outgoing minutes



During 2016 international outgoing minutes have dropped further to reach 2,845 million minutes comparing to 2,863 million minutes during 2015.

Despite the volatility in international outgoing minutes over the past five years, the CAGR shows an increase of 2.1% from 2012 to 2016.





International outgoing minutes

- Despite the drop of (1%) in international outgoing minutes between 2015-2016, the international calls revenue has decreased by (26%) over the same period, due to free international calls offers that was introduced by the operators during 2016.
- This decline indicates ongoing competitive pressure on pricing, as well as change in the overall subscribers' behaviour and usage.

International outgoing minutes

Minutes (in millions)	2012	2013	2014	2015	2016	% Change 2015-2016
GCC	123.6	124.3	104.3	79.9	70.8	(11%)
Zone 2	2,236	2,763	3,060.6	2,561.8	2,605.7	2%
Zone 3	87.1	82.5	66.4	63.9	48.7	(24%)
Zone 4	170.9	187	177	157.7	120.3	(24%)
Total	2,617.6	3,156.8	3,410.3	2,833	2,845.5	(1%)

International calls revenue

Revenues (BD in millions)	2012	2013	2014	2015	2016	% Change 2015-2016
GCC	11.8	12.4	11.00	8.6	6.7	(21%)
Zone 2	46.5	49.2	48.78	41.7	30.2	(28%)
Zone 3	8.5	6.3	5.2	4.3	3.5	(20%)
Zone 4	13.7	13.09	11.69	8.8	6.6	(25%)
Total	80.5	80.9	76.67	63.2	47	(26%)

GCC countries (Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates).

Zone 2: Calls to South Asian countries (Bangladesh, India, Pakistan, the Philippines and Sri Lanka).

Zone 3: Calls to other major destinations (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, UK, USA and Yemen).

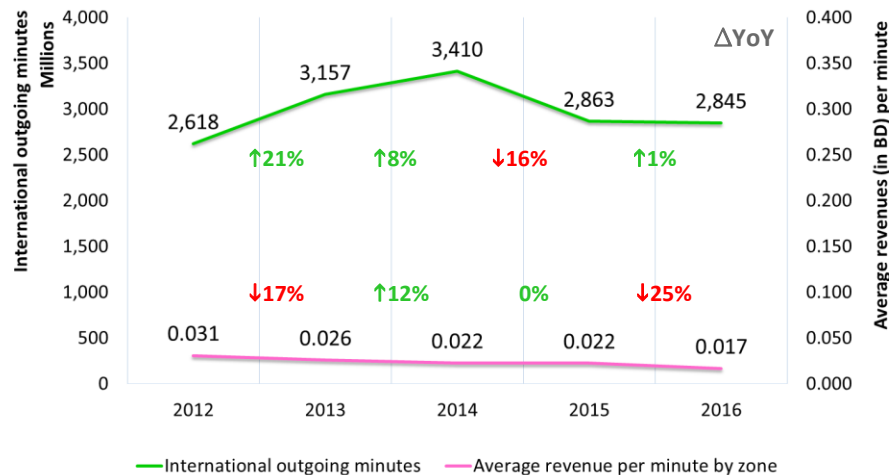
Zone 4: Calls to all other international destinations.



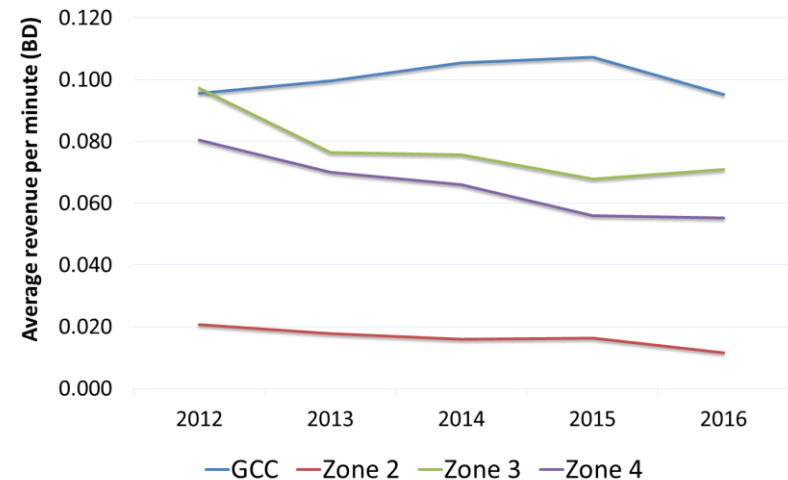
Average revenue per minute for international calls

- 📶 The average revenue per minute for international calls has fallen by almost 46% from 2012 to 2016.
- 📶 Despite the huge decrease in traffic, the average revenue per minute dropped by (25%) between 2015 and 2016.
- 📶 Comparing to 2015, on 2016 the biggest decrease in average revenue per minute was mainly from Zone 2 followed by GCC, (29%) and (11%) consecutively.

Average revenue per minute vs. growth in traffic

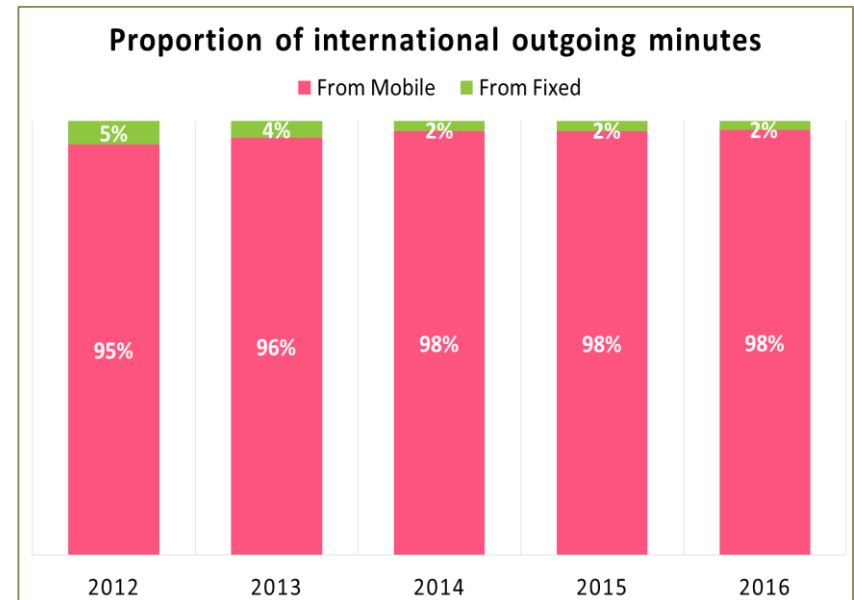
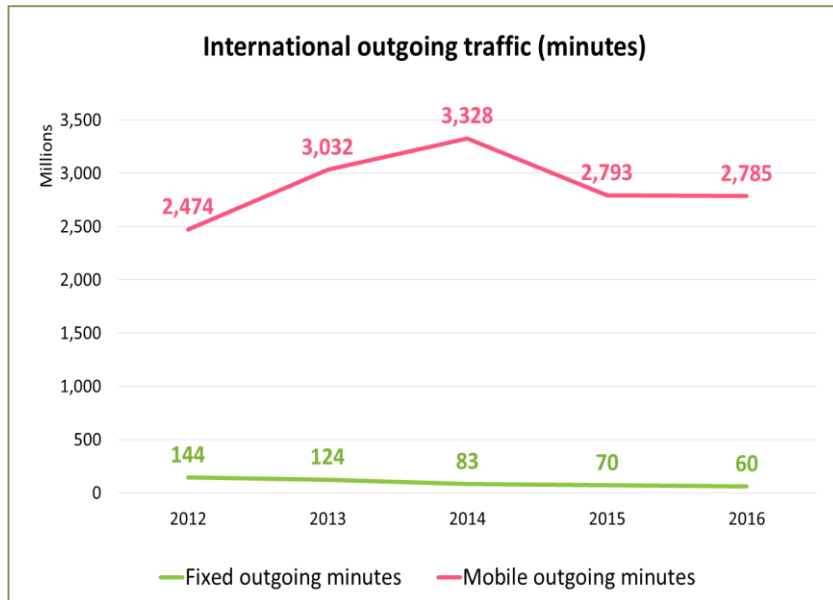


Average revenue per minute by zone





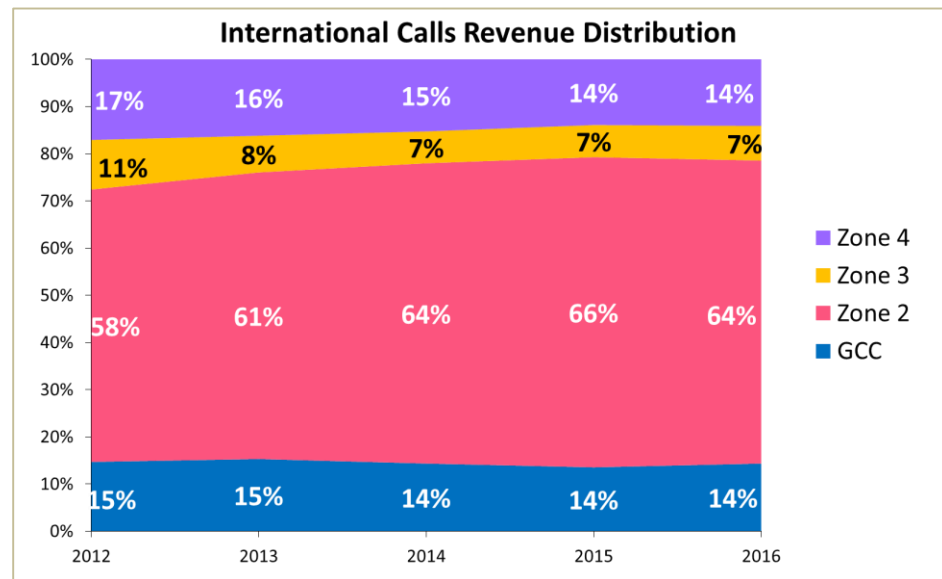
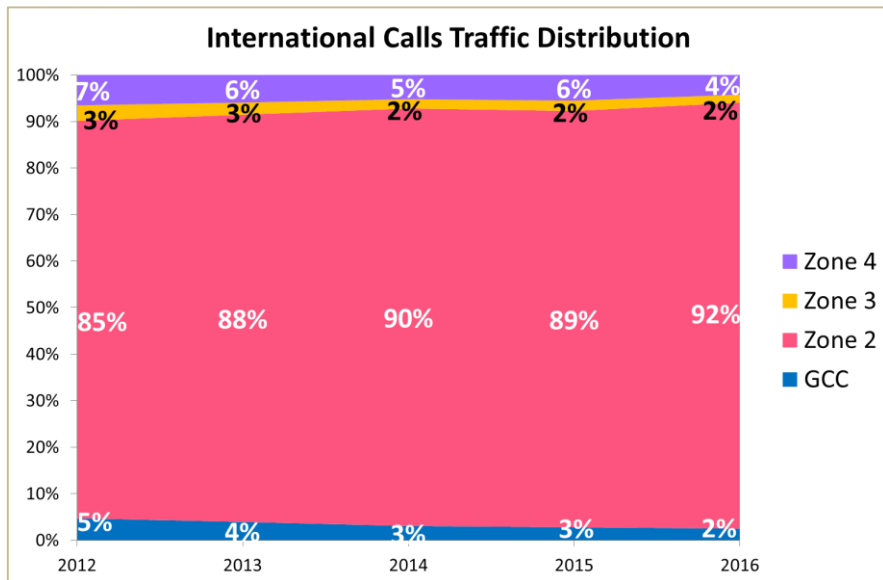
International outgoing minutes



- 📶 International outgoing minutes originated on mobile¹ stayed constant in 2016 comparing to 2015 , while the minutes originated on fixed fell by (14%) between 2015 and 2016.
- 📶 International outgoing minutes originated on mobile represented 98% of the total international outgoing minutes in 2016.

¹Minutes including prepaid calling card traffic.

International traffic Vs. Revenues by destination called



92% of total international calls **minutes** were made to Zone 2 (South Asian countries) in 2016.

64% of international **revenues** were generated from calls to Zone 2 (South Asian countries) in 2016.

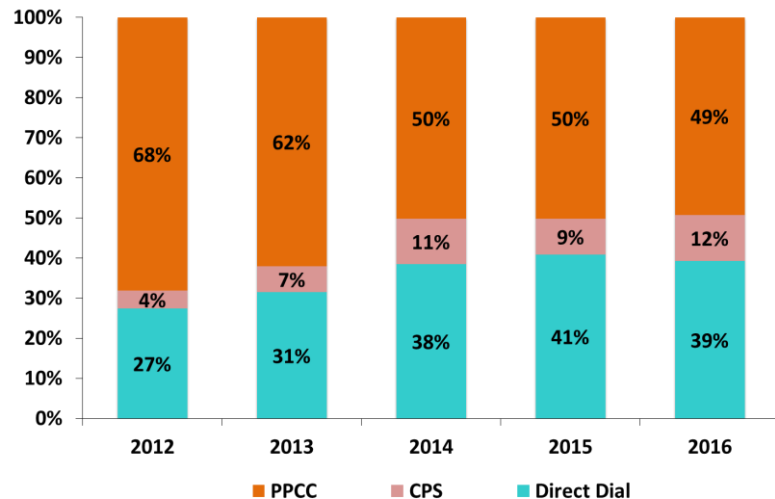
The average revenue per minute earned from calls to South Asian countries (Zone 2) continues to be relatively low.

By end of 2016, the total international voice traffic in minutes was 2,845,477,517 with revenue of BD 47,042,903 .

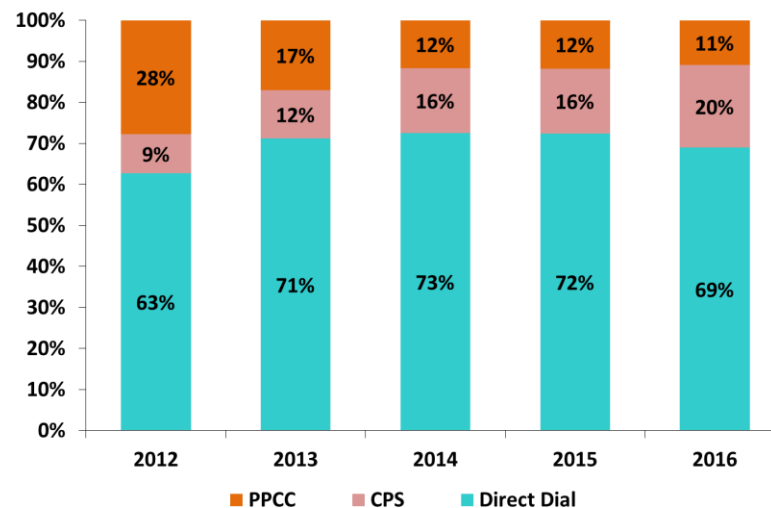


Distribution of international outgoing minutes/revenues by access type - Fixed telephony

Distribution of international **minutes** originated from fixed by access type



Distribution of international **revenues** originated from fixed by access type

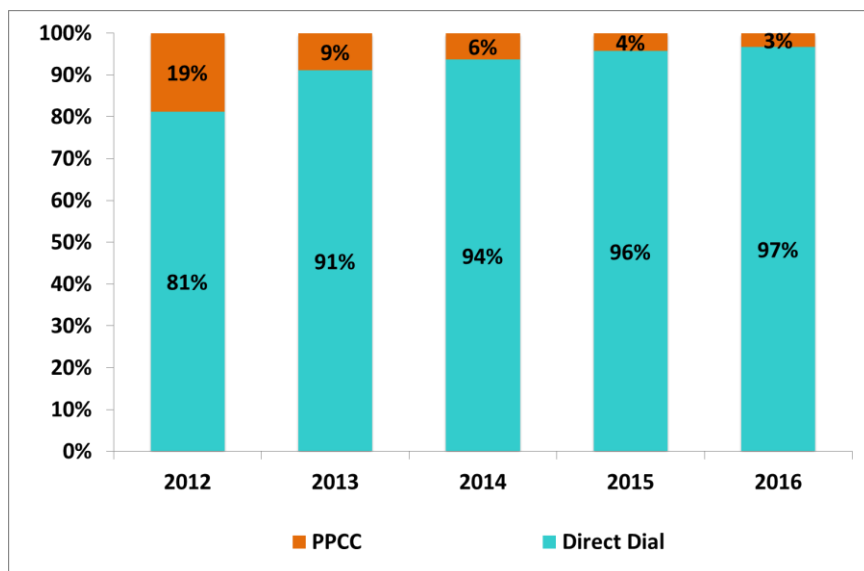


While the CPS has 12% only from total fixed originated minutes on 2016, its revenue has represented 20% of total fixed telephony traffic revenues.

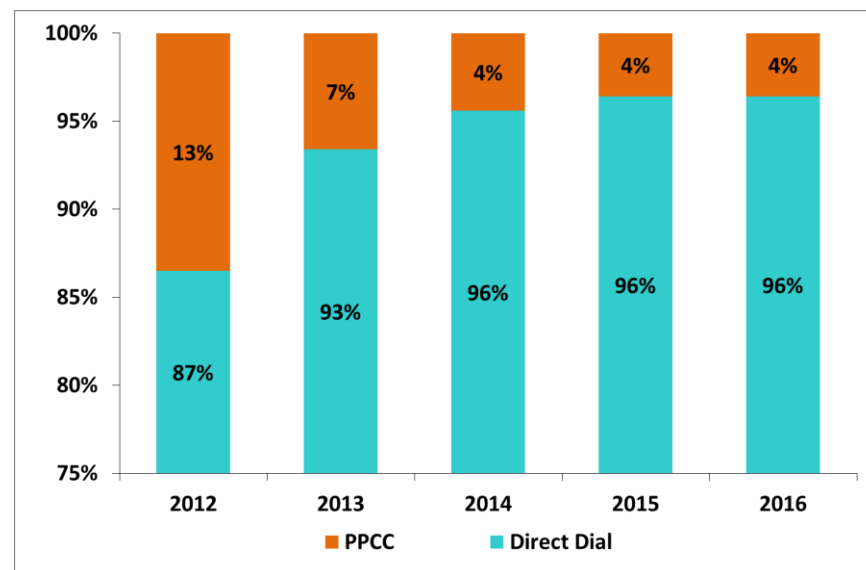
Distribution of international outgoing minutes/revenues by access type - Mobile



Distribution of international **minutes** originated from mobile by access type



Distribution of international **revenues** originated from mobile by access type



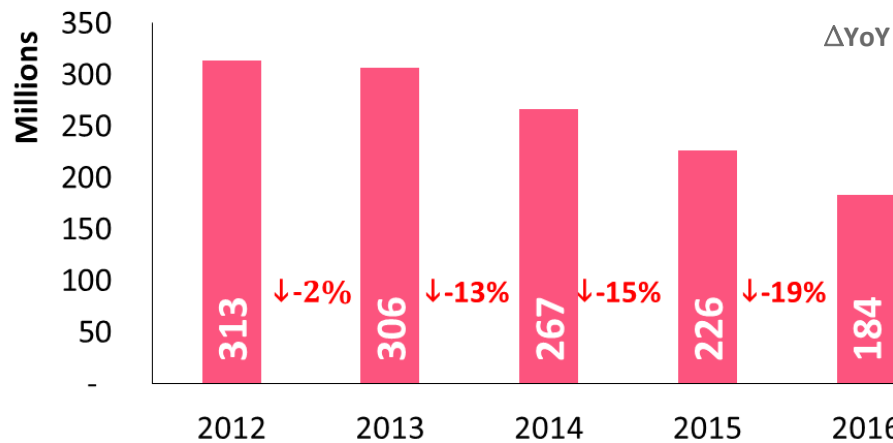
📶 In 2016, international direct dial traffic originated from mobile represented 97% of the total traffic, up from 96% in 2015 and 94% in 2014. The pricing of mobile-originated international direct dial services has become even more competitive in recent years.

📶 The direct dial represented 96% of total revenues originated from mobile

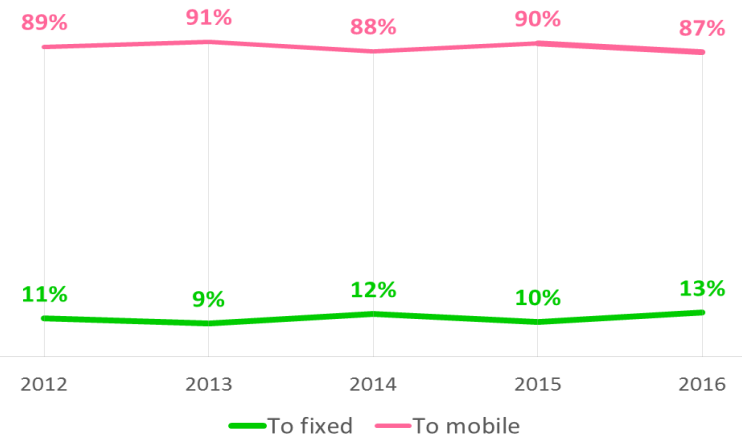


International incoming call minutes

Yearly international incoming traffic



Proportion of international incoming minutes to mobile and fixed



📞 In 2016, the total volume of international incoming minutes was 184 million minutes, compared to 226 million in 2015 a decrease by (19%).

📞 About 87% of international incoming calls were made to mobile.

Broadband services

End of H1 2017



2,403,612

Broadband subscription

166%

Penetration rate

93%

Mobile broadband subscriptions

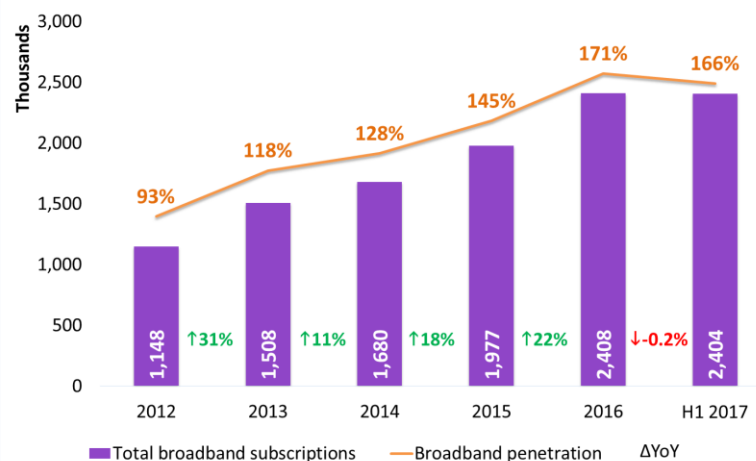
At the end of Q2 2017, there were approximately 2.4 million broadband subscriptions compared to 2.1 million at the end of Q2 2016 (14% growth), representing a broadband penetration of 166%.

Comparing to end of 2016, penetration rate has decreased due to a slight decrease in subscription and increase in population base.

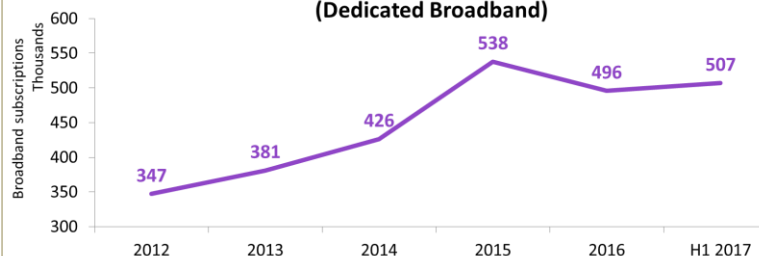
Broadband subscription growth continues to be driven by growth in the number of mobile broadband subscriptions as it represented 93% of total broadband subscriptions at the end of Q2 2017.

At the end of Q2 2017, there were 507 thousand subscriptions for dedicated broadband services.

Broadband subscriptions

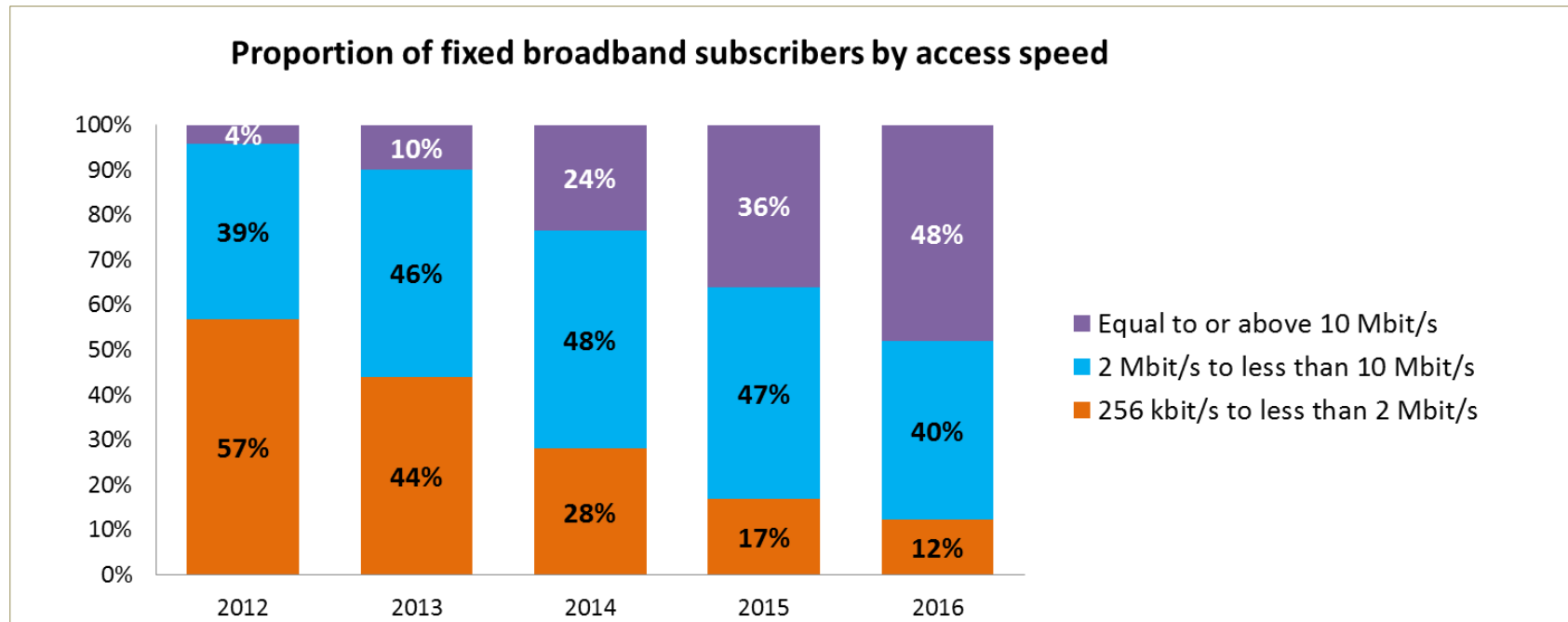


Broadband services subscriptions from a fixed location (Dedicated Broadband)





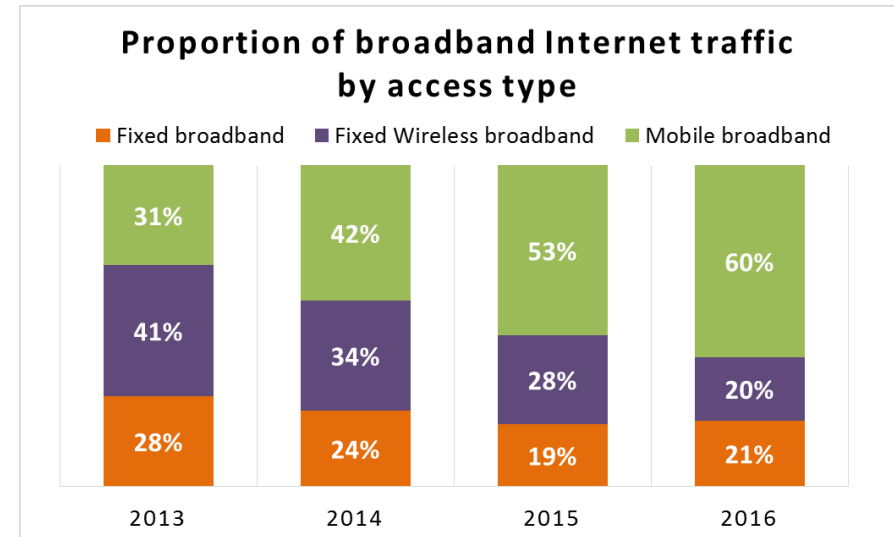
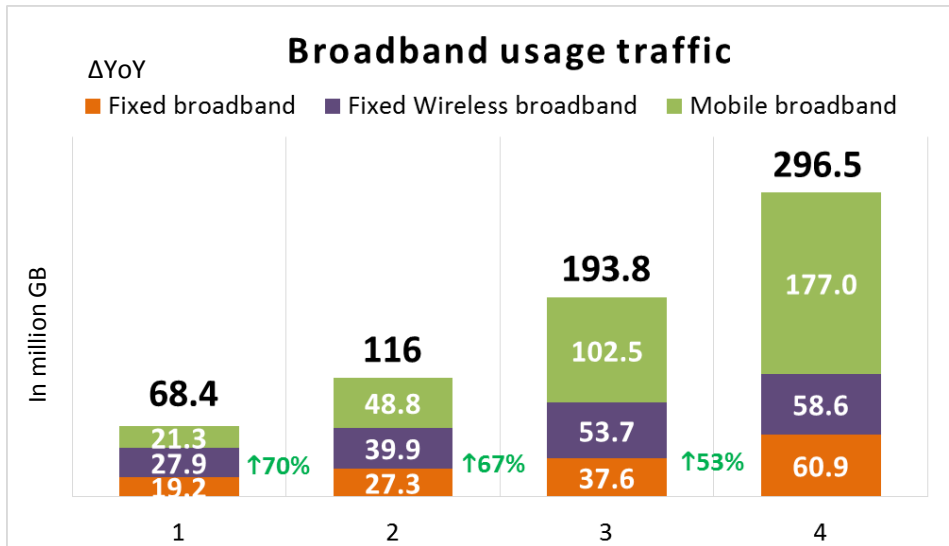
Proportion of broadband subscribers by access speed



By end of 2016 nearly 48% of fixed broadband subscribers were on plans with advertised speeds of 10Mbps and above compared to only 4% in 2012.



Broadband usage



In 2016, total broadband usage reached about 296.5 million GB comparing to 68.4 million GB in 2013 (63% GAGR).



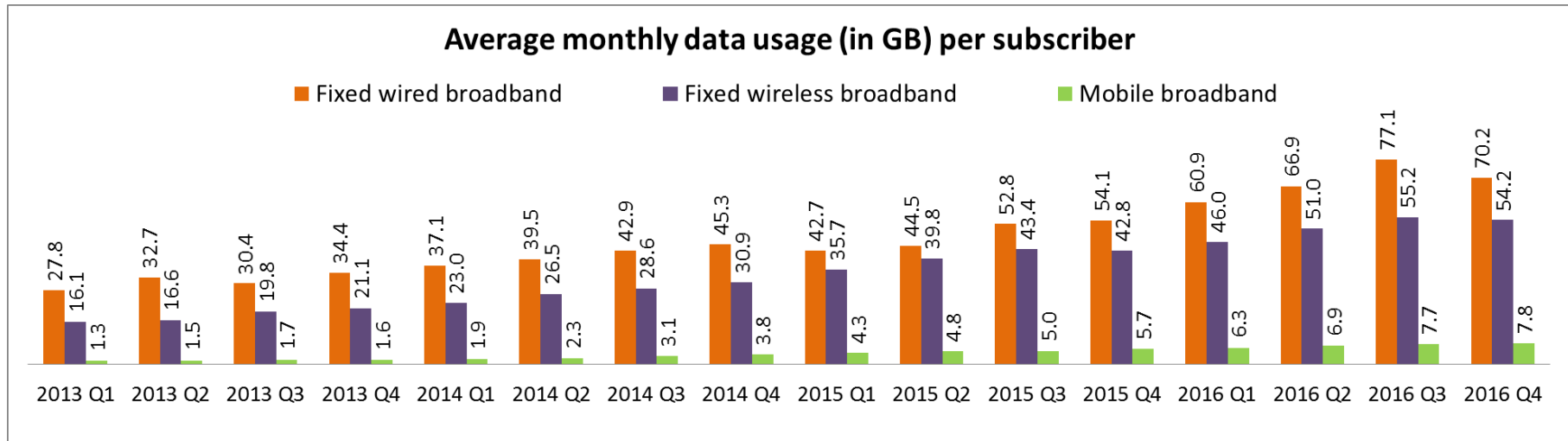
Between 2013 and 2016, Mobile broadband usage CAGR was 24%.



The traffic (in GB) generated from mobile broadband represented 60% of the total broadband usage in 2016, compared to 31% in 2013. This remarkable increase in Mobile Broadband traffic is being driven by the growing number of mobile subscribers, particularly smartphone users.



Average usage (in GB) per broadband subscription



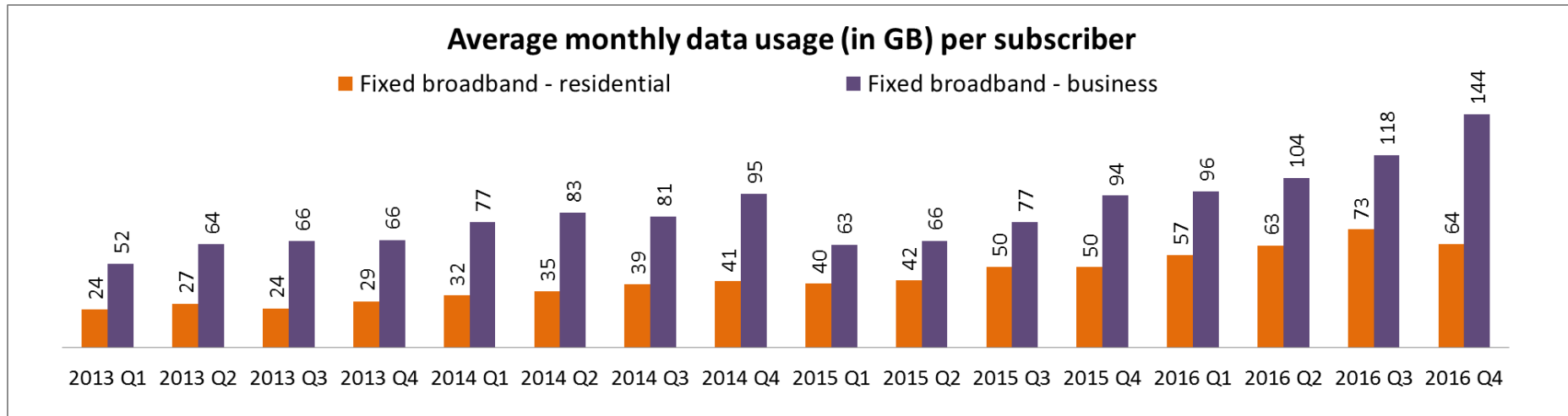
The average usage (in GB) per subscriber per month varies based on the broadband access type.



Fixed wired broadband subscribers generated the highest average monthly usage followed by fixed wireless subscribers and lowest usage was generated by mobile broadband subscribers (although the mobile broadband usage per subscriber is heavily influenced by low use pay-per-use subscribers).



Average usage (in GB) per broadband subscription



The average monthly usage for fixed broadband business subscribers represents almost double of the average usage of fixed broadband residential subscribers.

Broadband revenue



Broadband revenues remained relatively stable at 59 million BD at the end of 2016, probably due to the increase in number of subscriptions and decrease in mobile broadband prices.

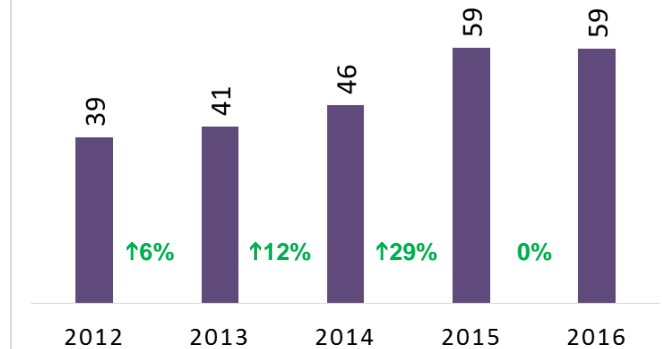
Revenue generated from mobile broadband represents about 56% of total broadband revenue in 2016 compared to 23% in 2012.

Revenue generated from business fixed broadband represents about 34% of total fixed broadband revenue in 2016 compared to 24% in 2012.

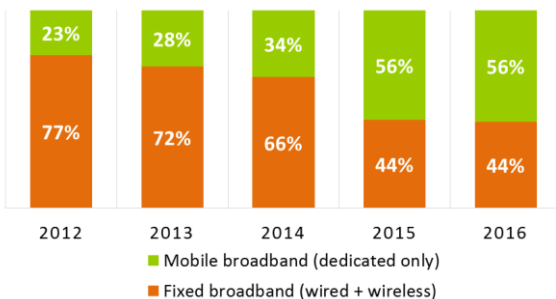
The reduction in residential broadband prices resulted in a drop in the average revenue per subscription by (5%) over the last year reaching BD9.1 , while the average revenue per subscription of business broadband has increased by 22% over the same period to reach BD 66

Total broadband revenue (BD in million)

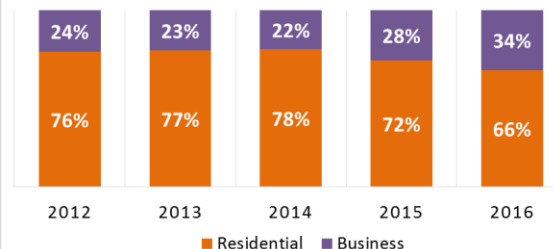
ΔYoY



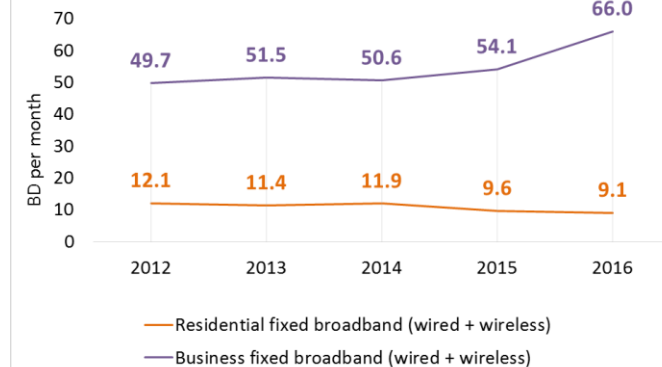
Distribution of broadband revenue



Distribution of revenue generated from fixed broadband (wired + wireless)

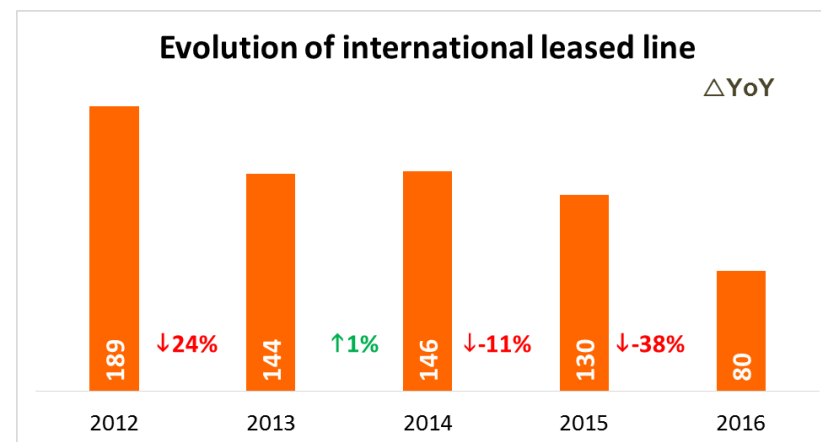
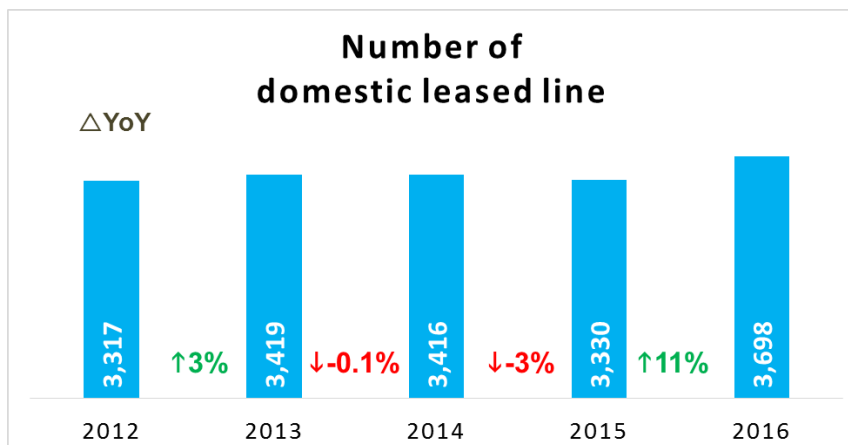


Average monthly revenues per fixed broadband subscription



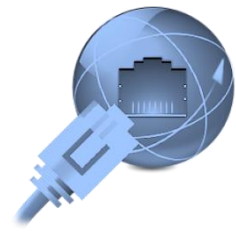
Leased line

End of 2016		3,67098	Domestic leased lines
		80	International leased lines
		BD 54,565,145	Leased lines revenues



📡 The total number of domestic leased increased by 11% at the end of 2016 comparing to 2015, while the number of international leased lines decreased by (38%) over the same period.

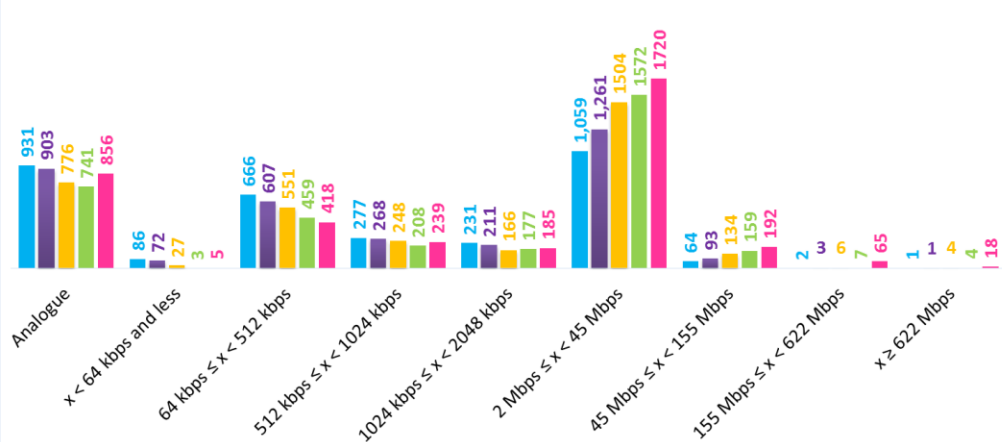
Domestic leased line



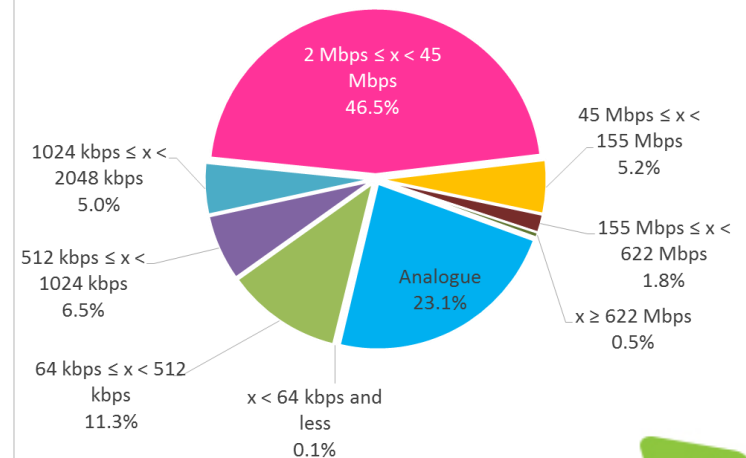
- The total number of domestic leased increased by 11% at the end of 2016 comparing to 2015, while there has been a further drop in slower speed services, that drop was corresponded by increase in higher speed services.
- A similar pattern has been observed in respect of international leased lines in recent years.

Domestic leased line for each speed

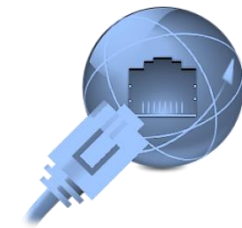
■ 2012 ■ 2013 ■ 2014 ■ 2015 ■ 2016



Distribution of domestic leased line by speed

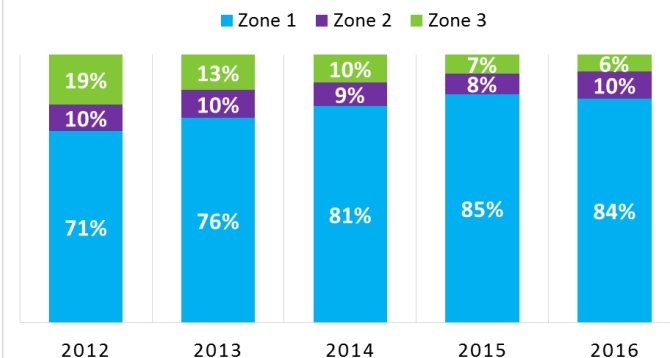


International leased lines

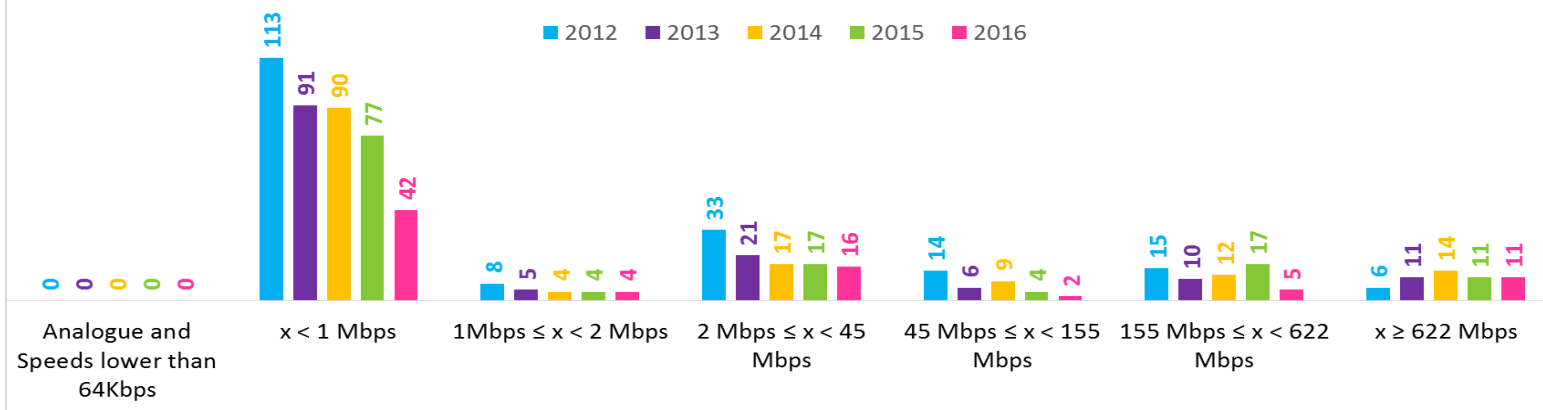


- Total Number of International leased lines dropped to 80 lines compared to 130 Lines in 2015.
- More than 50% of international leased lines are for speed less than 1Mbps.
- 84% of international leased lines are destined to GCC area.
- The total number of international leased lines decreased over the last year, as most of biggest international leased lines providers decreased their supply, while only few smaller operators started to operate on this market.

Distribution of international leased lines by destination zone



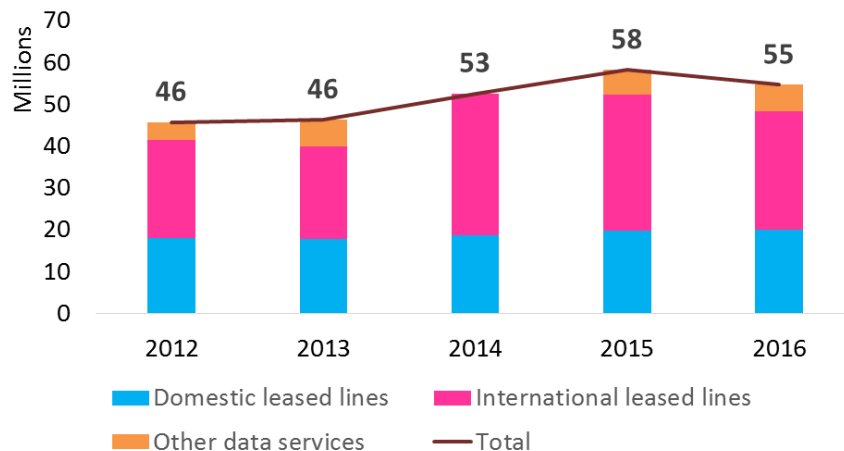
Number of international leased lines



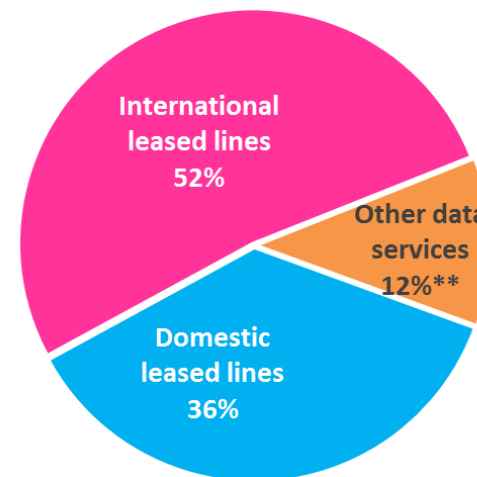
Leased line revenues



Leased lines revenue (in BD million)



Distribution of leased lines revenue



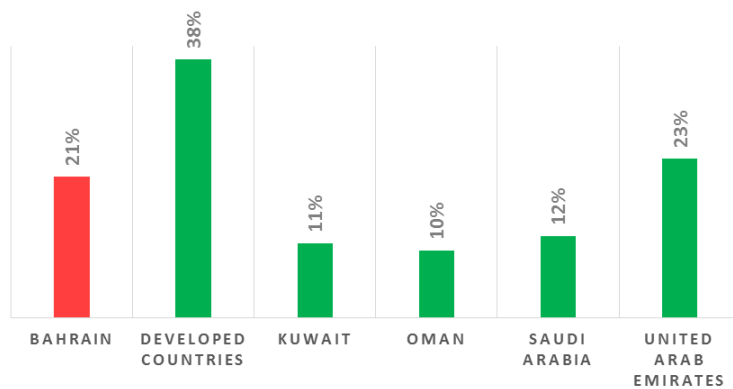
📶 The revenue generated from leased lines services declined by (5%) in 2016, that revenue decrease was mainly from the drop in international leased lines services provided.

** Other Data services includes national and international frame relay, MPLS/IPVPN, managed leased line and ATM services

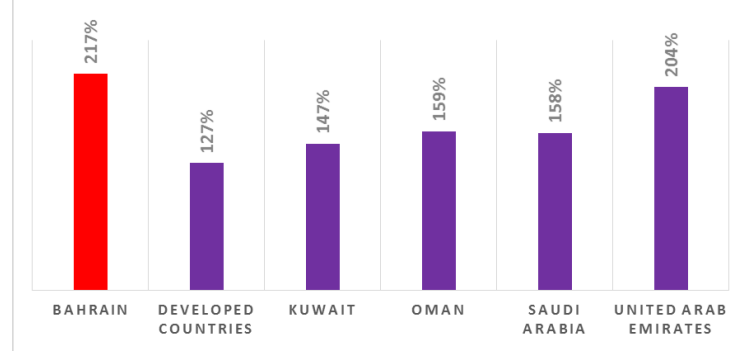
Benchmarking of telecom service penetration rates with GCC countries

Bahrain compares well with other GCC countries and with developed countries in terms of telecom services penetration.

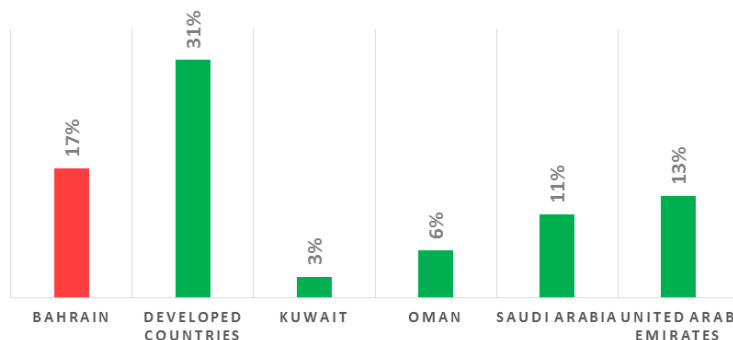
FIXED TELEPHONE PENETRATION 2016



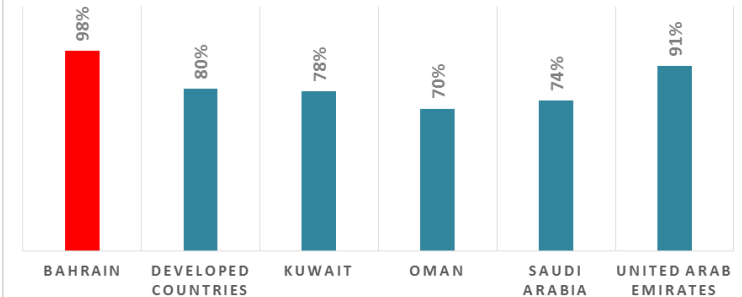
MOBILE CELLULAR SUBSCRIPTIONS PENETRATION 2016



FIXED BROADBAND PENETRATION 2016



PERCENTAGE OF INDIVIDUALS USING THE INTERNET 2016



* Based on ICT Facts and Figures 2017– ITU

** Based on ITU Key 2005-2017 ICT data for the world, by geographic regions and by level of development

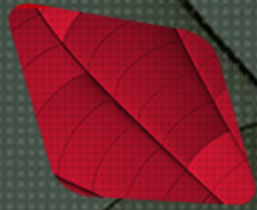


List of acronyms

ADSL	Asymmetric Digital Subscriber Line
BD	Bahraini Dinar
CPS	Carrier Pre-Selection
CAGR	Compound Annual Growth Rate
GCC	Gulf Cooperation Council
IDD	International Direct Dial
ITU	International Telecommunication Union
Kb/s	Kilobit per second
Mb	Megabit
Mbps	Megabit per second
OLO	Other licensed operators
PPCC	Pre-Paid Calling Card
PSTN	Public Switched Telephone Network
PPP	Purchasing power parity
SMS	Short Message Service
TRA	Telecommunications Regulatory Authority

Definitions

Indicator	Definition
Fixed-telephone subscriptions	Fixed-telephone subscriptions refers to the sum of active number of analogue fixed-telephone lines, voice-over-IP (VoIP) subscriptions, fixed wireless local loop (WLL) subscriptions.
Prepaid mobile subscribers	Prepaid mobile-cellular telephone subscriptions (ITU code i271p) Refers to the total number of mobile-cellular telephone subscriptions that use prepaid refills. These are subscriptions where, instead of paying an ongoing monthly fee, users purchase blocks of usage time. Only active subscriptions should be included (those used at least once in the last three months for making or receiving a call or carrying out a non-voice activity such as sending or reading an SMS or accessing the Internet).
Postpaid mobile subscribers	Postpaid mobile-cellular telephone subscriptions Refers to the total number of mobile-cellular subscriptions where subscribers are billed after their use of mobile services, at the end of each month. The postpaid service is provided on the basis of a prior arrangement with a mobile cellular operator. Typically, the subscriber's contract specifies a limit or allowance of minutes, text messages, etc. The subscriber will be billed at a flat rate for any usage equal to or less than that allowance. Any usage above that limit incurs extra charges. Theoretically, a subscriber in this situation has no limit on use of mobile services and, as a consequence, unlimited credit.
Active mobile-broadband subscriptions	<p>Active mobile-broadband subscriptions refers to the sum of standard mobile-broadband and dedicated mobile broadband subscriptions to the public Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband enabled-handsets. The indicator can be further broken down into:</p> <p>Standard mobile-broadband subscriptions (ITU code i271mb_active): Refers to active mobile-cellular subscriptions with an advertised data speed of 256 kbit/s or greater that allow access to the greater Internet via HTTP and have been used to make a data connection using Internet protocol (IP) in the previous three months. Standard SMS and MMS messaging do not count as active Internet data connections, even if they are delivered via IP.</p> <p>This includes mobile subscriptions that use mobile-broadband services on a pay-per-use basis. It excludes mobile subscriptions with a separate monthly data plan for mobile-broadband access (see Indicator 25b, Dedicated mobile broadband subscriptions).</p> <p>Dedicated mobile-broadband subscriptions (ITU code i271md): Refers to subscriptions to dedicated data services (over a mobile network) that allow access to the greater Internet and that are purchased separately from voice services, either as a standalone service (e.g. using a data card such as a USB modem/dongle) or as an add-on data package to voice services that requires an additional subscription. All dedicated mobile-broadband subscriptions with recurring subscription fees are included as 'active data subscriptions' regardless of actual use. Prepaid mobile-broadband plans require use in the last three months if there is no monthly subscription. This indicator could also include mobile WiMAX subscriptions.</p>



Thank you!