Telecommunications Markets Indicators in the Kingdom of Bahrain

Full year 2018 and up to Q2 2019
Issued in December 2019

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TELECOMMUNICATIONS REGULATORY AUTHORITY
Kingdom of Bahrain - مملكة البحرين

CONTENT

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.
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- This is the fourteenth Telecommunications Markets Indicators Report and it covers a large range of telecoms services indicators for 2018 up to Q2 2019 such as the number of subscribers, penetration rates, calls usage and telecoms revenues.

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KEY INDICATORS

	2016		2017		2018		Q2 – 2019*
Mobile	2.99 million 213%	↓21%	2.36 million 163%	↓11%	2.09 million 139%	↓0.4%	2.08 million 139%
Fixed Telephone (Excluding ISDN & CPS)	234 Thousand 16%	↑3%	238.9 Thousand 16%	↓4%	228.9 Thousand 15%	↓7%	226 Thousand 15%
Broadband	2.4 million 171%	↓1.4%	2.37 million 164%	↓8.9%	2.16 million 144%	↓7.8%	2.33 million 156%
Internet Users	98%	↑5%	96%		99%		99%**

** Based on 2018 survey   Penetration rate

* Population is based on CIO mid-year estimation

2016	2017	2018	Q2 2019
1,423,726	1,501,116	1,503,091	1,503,092

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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
BT Solutions LTD					✓	✓	
Equant Global Network - EGN BV					✓		IPVPN
Etisalcom Bahrain	✓	✓		✓	✓		MPLS
Golden Sands Electronic and Phone							Bulk SMS
Gulf Electronic Tawasul					✓		
IMC							International calls through wholesale
Infonas	✓	✓		✓	✓	✓	
Kalaam telecom	✓	✓		✓	✓		
Mobitel							Bulk SMS
Northstar Technology		✓		✓	✓		
Nuetel Communications	✓	✓		✓	✓	✓	IPTV - ICT
Orbit Data Systems				✓			
Rapid telecoms	✓	✓		✓	✓	✓	
STC Bahrain	✓	✓		✓	✓		
Sita						✓	
Viacloud	✓	✓		✓	✓		
Vodafone Enterprise Bahrain						✓	IPVPN -Ethernet Wireline - Ethernet VPN
Zain Bahrain	✓	✓	✓	✓	✓	✓	
Zain Global Communications Services					✓		International transit voice services
Zajil					✓		

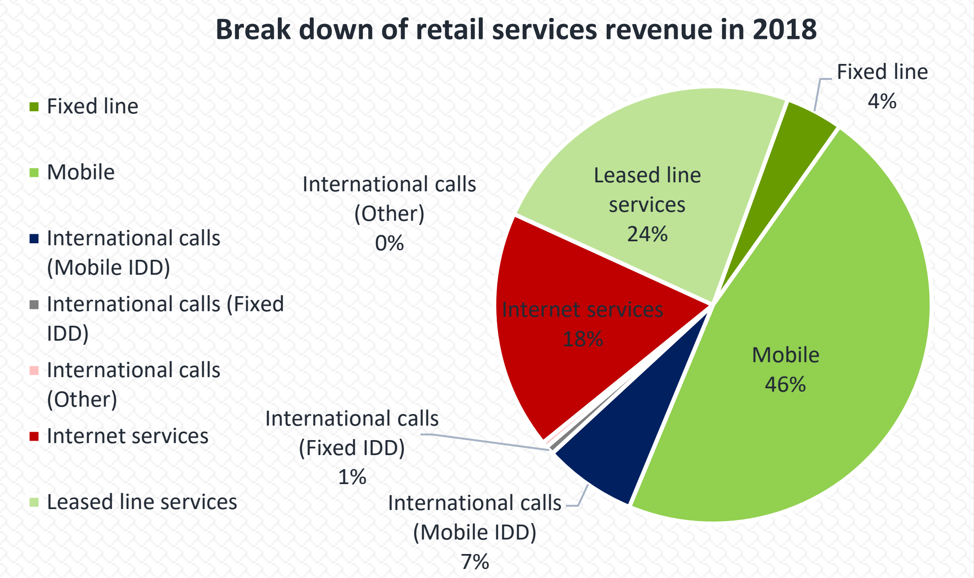
MAIN TELECOM INDICATORS

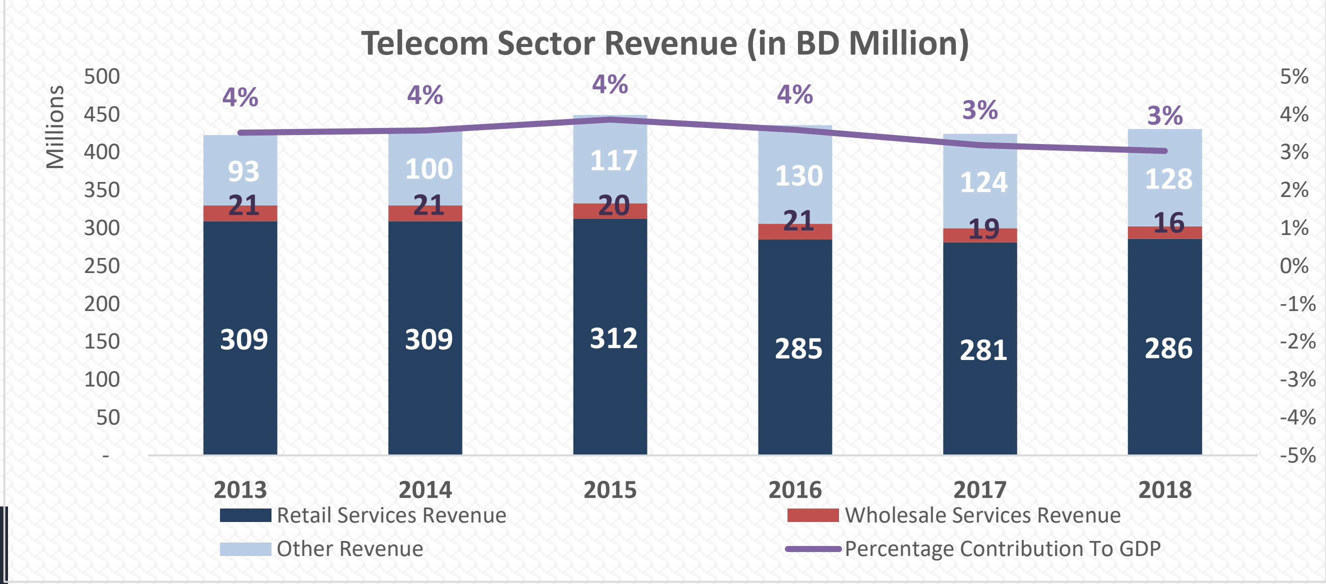
Indicator	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YoY Growth 2017-2018	CAGR 2009 – 2018
Number of fixed line telephony (excluding ISDN)	238,659	231,463	247,691	259,723	251,643	246,696	242,439	234,368	238,969	228,905	(4.2%)	(0.42%)
Fixed line telephony penetration	20%	19%	21%	21%	20%	19%	18%	16%	16%	15%		
Total mobile subscribers	1,401,974	1,567,745	1,693,650	2,123,903	2,210,190	2,322,860	2,533,208	2,994,865	2,364,477	2,092,714	(11%)	4%
Mobile penetration	119%	128%	142%	172%	176%	177%	185%	210%	158%	139%		
Total broadband subscribers	158,335	424,061	642,412	1,148,264	1,507,956	1,679,681	1,977,402	2,407,837	1,812,112	2,361,407	30%	31%
Broadband penetration	13%	35%	54%	93%	118%	128%	145%	171%	164%	144%		
Percentage of individuals using the Internet	53%	55%	77%	88%	90%	91%	93%	98%	96%	99%		
Telecommunications revenues (BD in million)	338	360	406	409	423	430	453	435	424	431	1.5%	2.46%
Number of employees in the telecommunications sector	2504	2584	2708	3141	3000	3,092	3206	3230	2,914	2,902	(0.4%)	1.49%

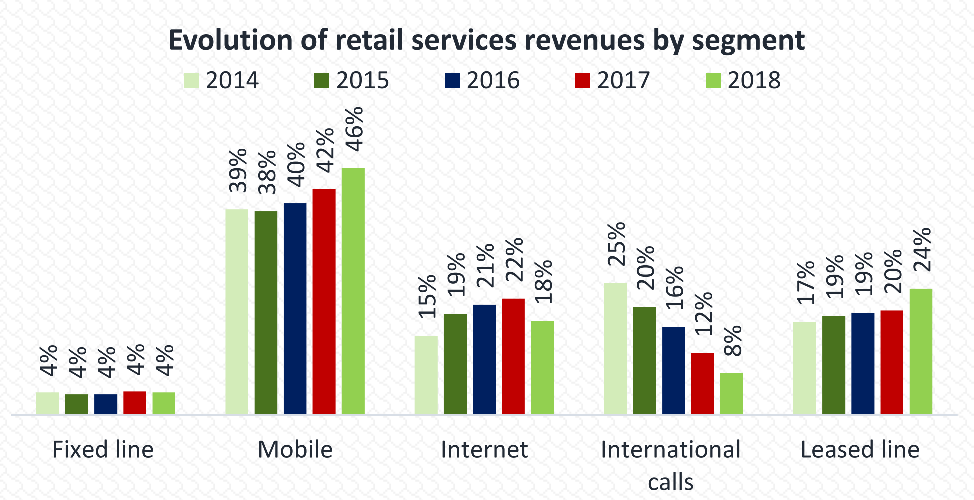
Notes:
1- The number of subscribers refers to the end of the period.
2- Number of broadband subscribers include fixed wired, wireless and mobile.
4- The source of Percentage of individuals using the Internet is the ITU and TRA residential survey.
5- Penetration is based on mid-year population estimated by CIO

REVENUES IN THE TELECOM SECTOR

- Telecommunication services generated BD 431 million in 2018 compared to BD 424 million in 2017, an increase of 1.5%.
- Telecommunication sector revenues represent 3% of the GDP as of 2018.
- The proportion of mobile revenue dropped to 46% in 2018, compared to 48% in 2017.
- Mobile services revenue account for more than half of the telecom retail services revenue (as it reached 53% if we include revenues generated from international calls using Mobile).
- More detailed information at Annex A.

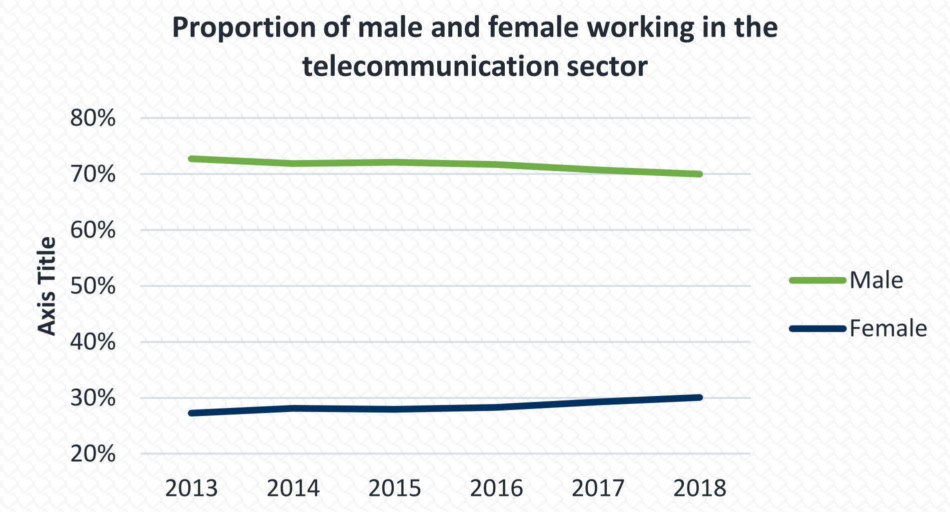


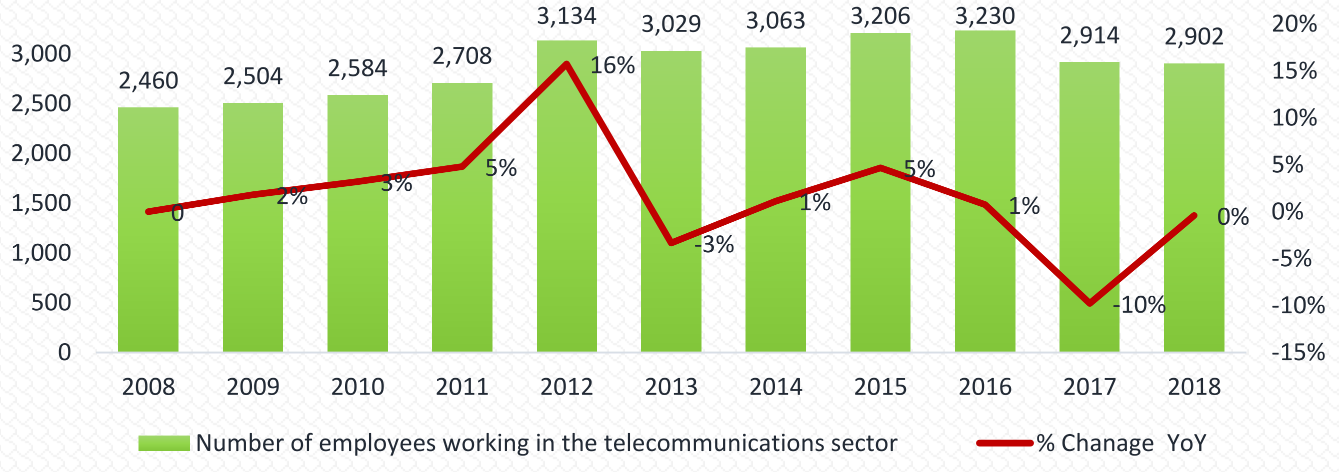


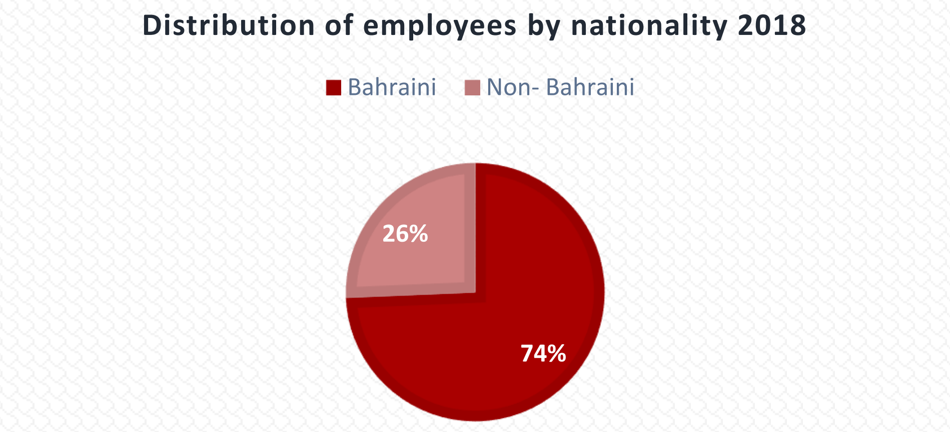


EMPLOYMENT IN THE TELECOM SECTOR

- 2,902 employees are working in the telecommunication sector as of 2018.
- The sector achieves high degree of Bahrainisation, 74% of the employees in the sector are Bahrainis in 2018.
- Females represent 30% of employees in the telecom sector.

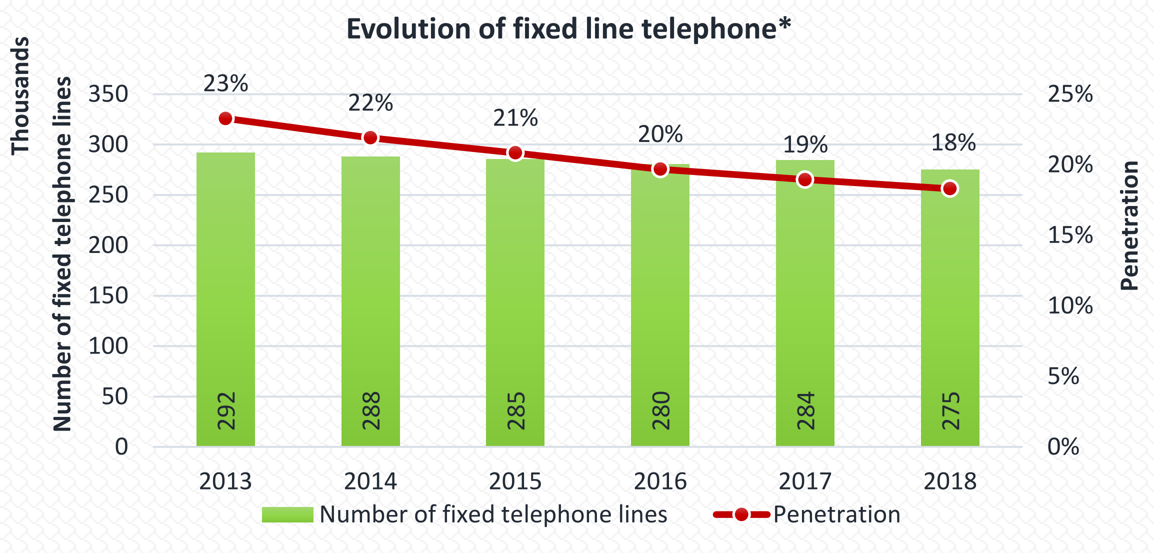






FIXED LINE TELEPHONY SERVICES

FIXED LINE TELEPHONY SERVICES



- There were 274,921 fixed-line telephony services in operation at the end of 2018, compared to 284,311 fixed telephone lines in services at the end of 2017.
- In regard to ISDN service, Basic-rate ISDN has declined by 12% between 2017 & 2018 while Primary-rate ISDN service increased by 2%.

Number of	2013	2014	2015	2016	2017	2018
ISDN	2,639	2,610	2,560	2,591	2,525	2,428
Basic-rate	1,398	1,324	1,206	1,139	1,086	958
Primary-rate	1,241	1,286	1,354	1,452	1,439	1,470

2018

228,905 **Number of total fixed lines**
15% **Penetration rate**

274,921 **Number of fixed lines, including total ISDN lines**
18% **Penetration rate**

* Including ISDN subscribers (Basic ISDN = 2 lines, Primary ISDN= 30 lines)
^ Revised numbers due to an operator resubmission

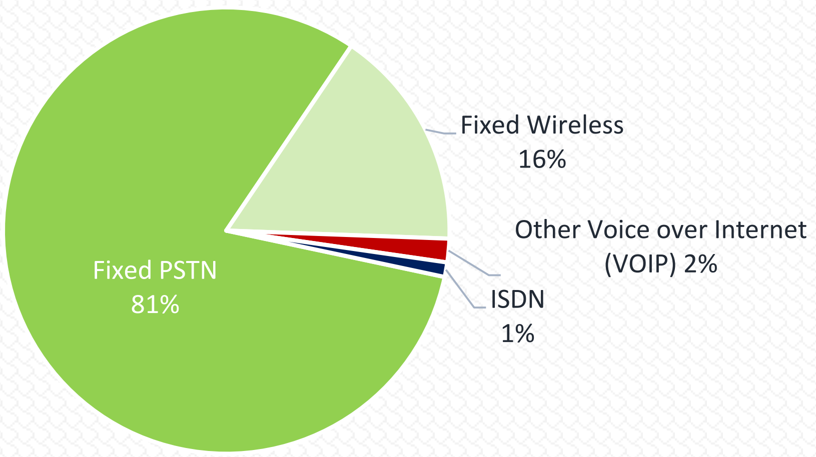
*Mid-year population estimated by CIO:

2017	1,501,116
2018	1,503,091

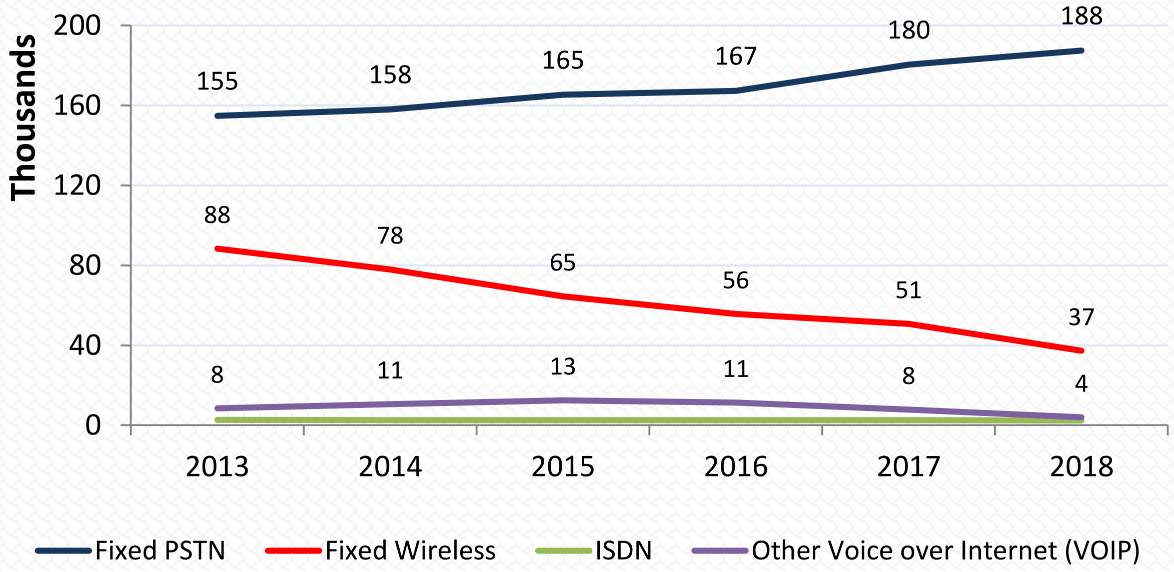
FIXED LINE TELEPHONY BY ACCESS TYPE

- Fixed PSTN subscriptions increased by 4% between 2017 & 2018.
- As regards the significant decrease in Fixed Wireless and VOIP subscriptions, this is due to subscribers switching from Fixed Wireless and VOIP to Fixed PSTN.

Proportion of fixed line by access type 2018



Fixed telephone lines by access type



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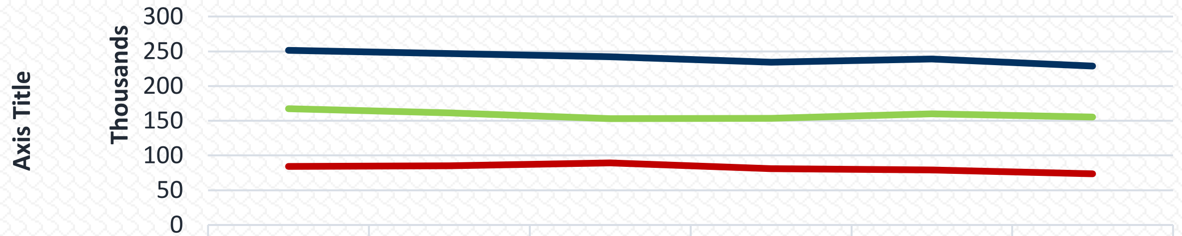
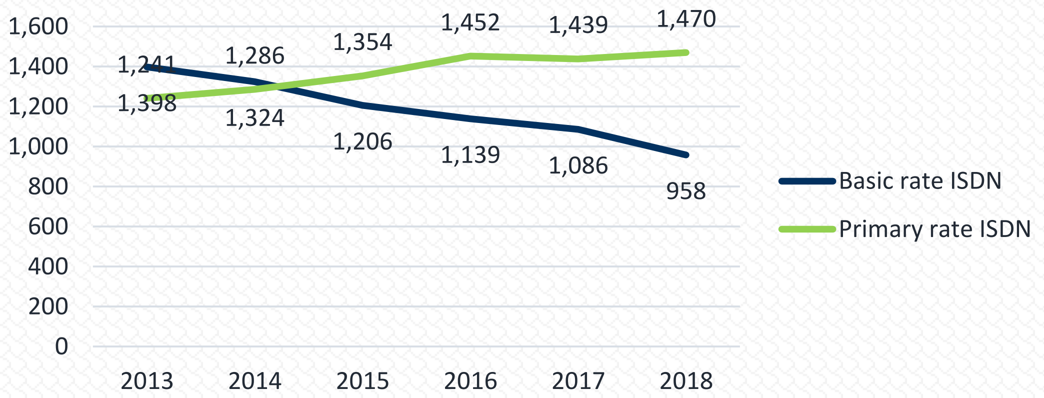
FIXED LINE TELEPHONY SERVICES BY CUSTOMER TYPE

Number of fixed telephony lines by customer type (Excluding ISDN)



	2013	2014	2015	2016	2017	2018
Total	251,643	246,696	242,439	234,368	238,969	228,905
Residential	167,502	161,295	152,948	153,327	159,998	155,293
Business	84,141	85,401	89,491	81,041	78,971	73,612

Number of ISDN subscriptions



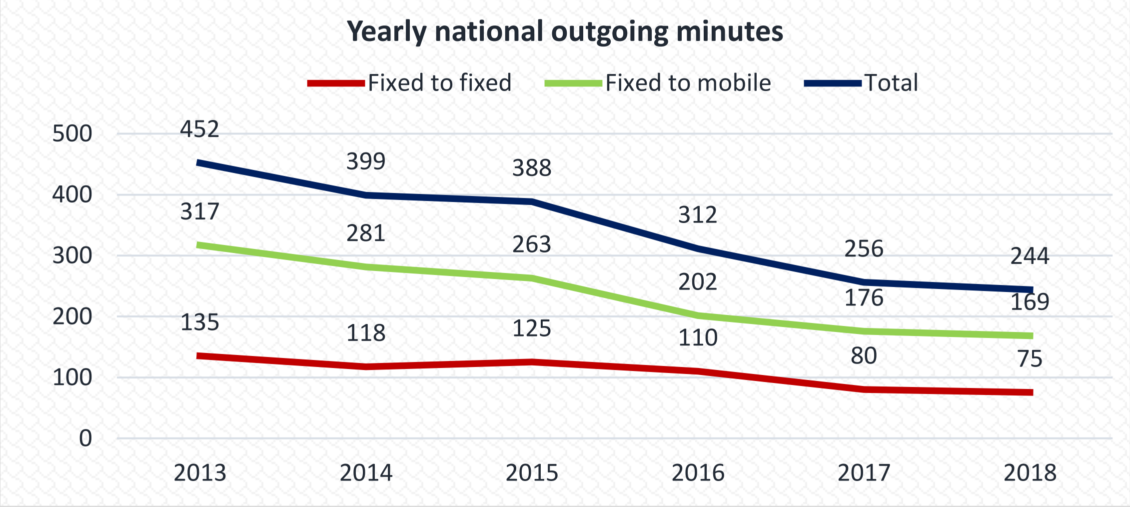
- Total number of fixed telephony lines has slightly decreased by 4%, whereas the total number of residential lines decreased by 9% and the total number of business lines also decreased by 7% to reach 74 thousand.

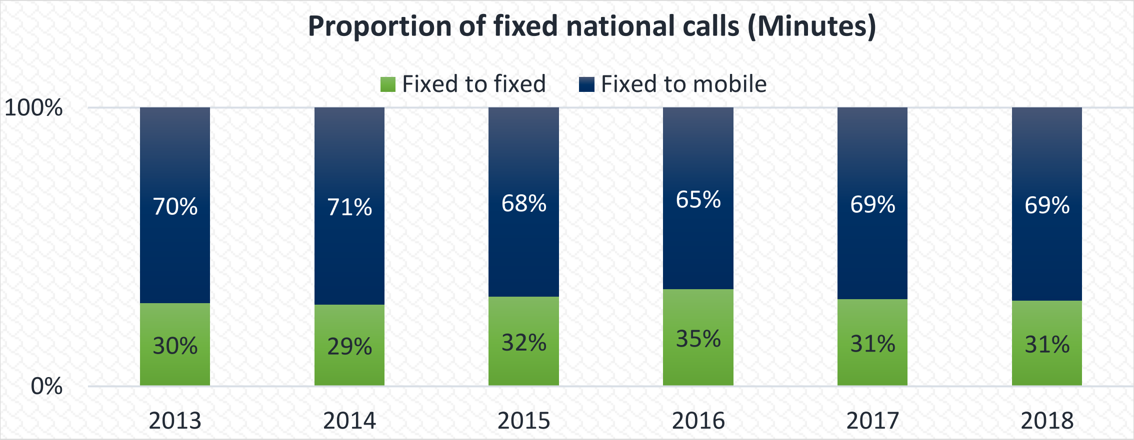
- Primary rate ISDN increased by 2% while Basic rate ISDN declined by 12%. Over the last 6 years this trend has been persistent as since 2013, Primary rate ISDN increased by 18% while Basic rate ISDN decreased by 31%

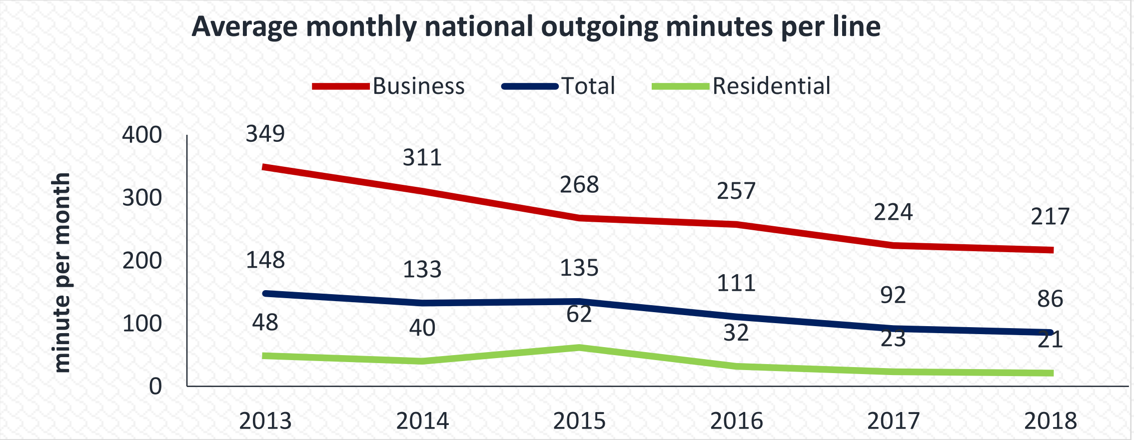
FIXED LINE TELEPHONY OUTGOING MINUTES

- The outgoing fixed call minutes fell by around 5% from 255.9 to 243.9 million minutes in 2018 as consumers increasingly use mobile and internet-based voice and messaging services instead of fixed line telephony calls.

- The decline in average monthly national outgoing minutes continued as the average minutes for business fixed lines declined by 3%, while for residential fixed lines it declined by 8%.







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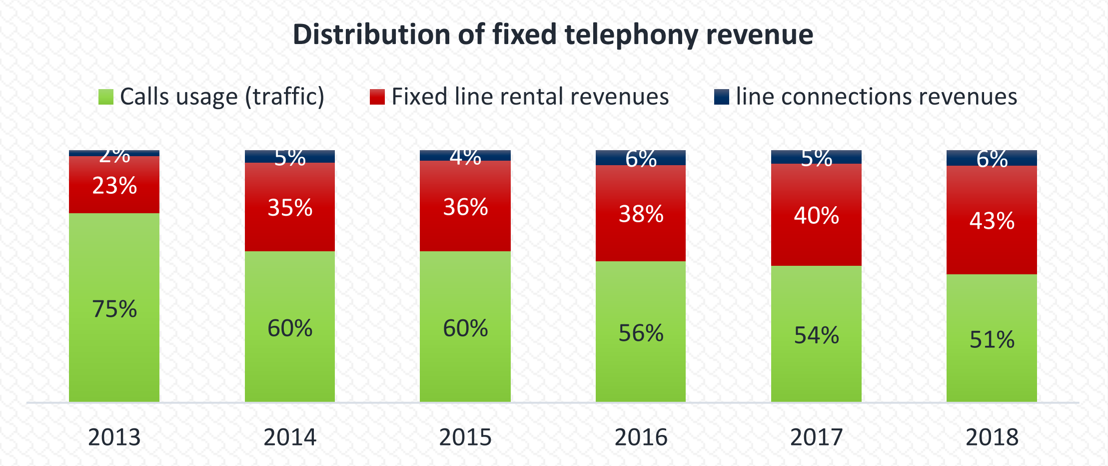
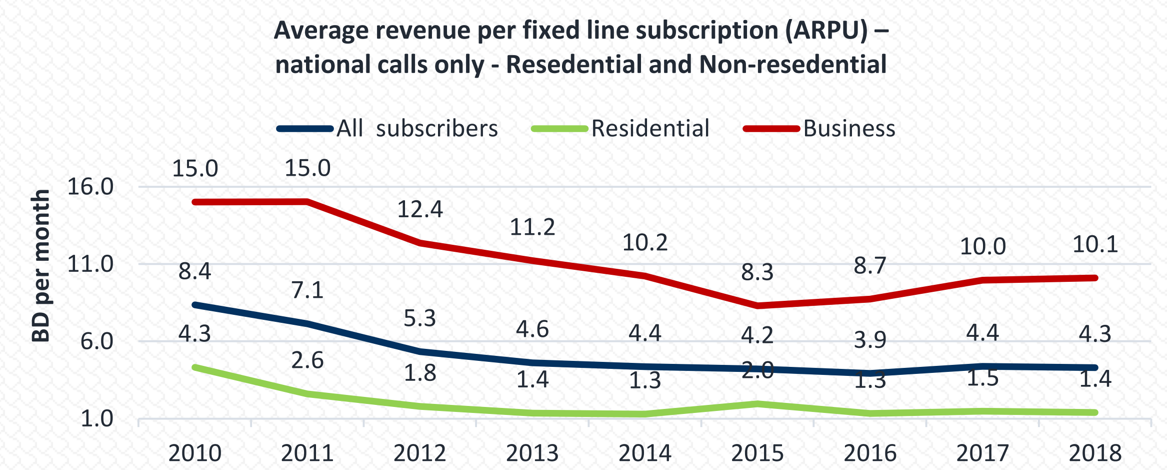
FIXED LINE TELEPHONY SERVICE REVENUE

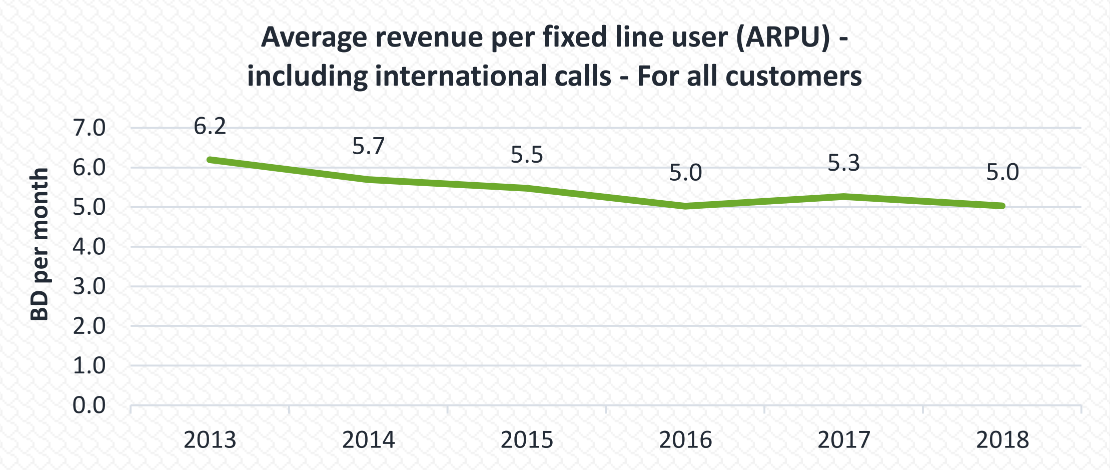
- Fixed line revenues declined by around (0.07%) between 2017 and 2018. This was mainly due to the decrease in number of subscriptions, which affected the fixed line rental revenue.

- The average monthly revenue per user for national calls only slightly decreased from BD 4.4 in 2017 to BD 4.3 in 2018. Average revenue including international calls also dropped to 5.0 compared to 2017.

- More detailed information at Annex A.







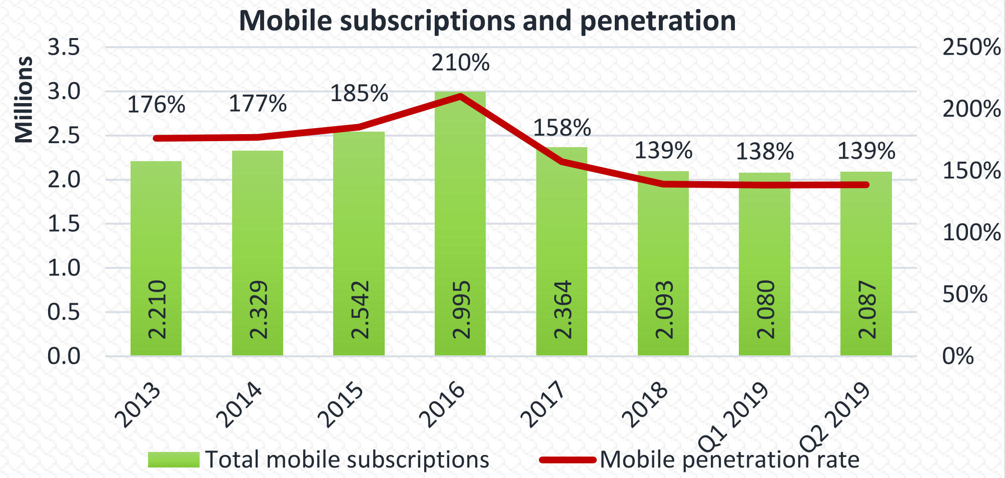
MOBILE SERVICES

MOBILE SERVICES

•At the end of 2018 the number of subscriptions decreased by 11%. This is mainly due to sim regulation and the termination of unlimited data offers by operators for both pre-paid and post-paid packages that were offered during 2016.

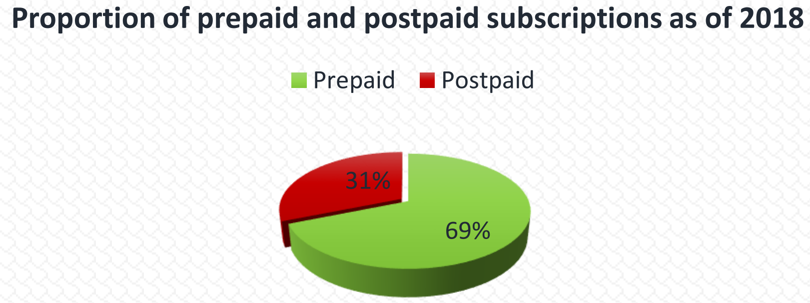
•At the end of Q2 2019 postpaid subscriptions increased by 6% compared to the end of 2017 as the postpaid subscriptions presented 31.2% while prepaid subscriptions decreased by 18% for the same period.

•Overall, mobile subscriptions decreased by 11% between the end of 2017 and the end of Q2 2019.



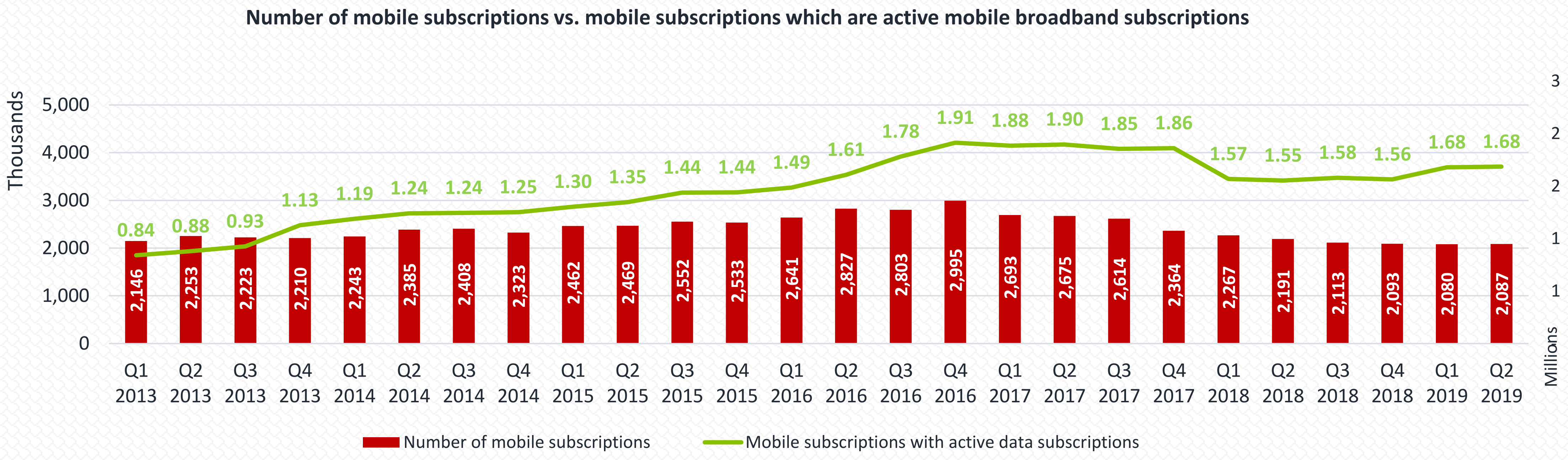
End of Q2 2019		
	2,086,839	Number of total mobile subscriptions
	139%	Penetration rate
	68.8%	Percentage of prepaid subscriptions

	2015	2016	2017	2018	Q1 2019	Q2 2019
Total	2,541,688	2,994,865	2,364,477	2,092,714	2,079,768	2,086,839
% of Prepaid	78%	81%	73.94%	69.46%	69.02%	68.8%
% of Postpaid	22%	19%	26.06%	30.54%	30.98%	31.2%



MOBILE SUBSCRIPTIONS HAVING DATA SUBSCRIPTIONS

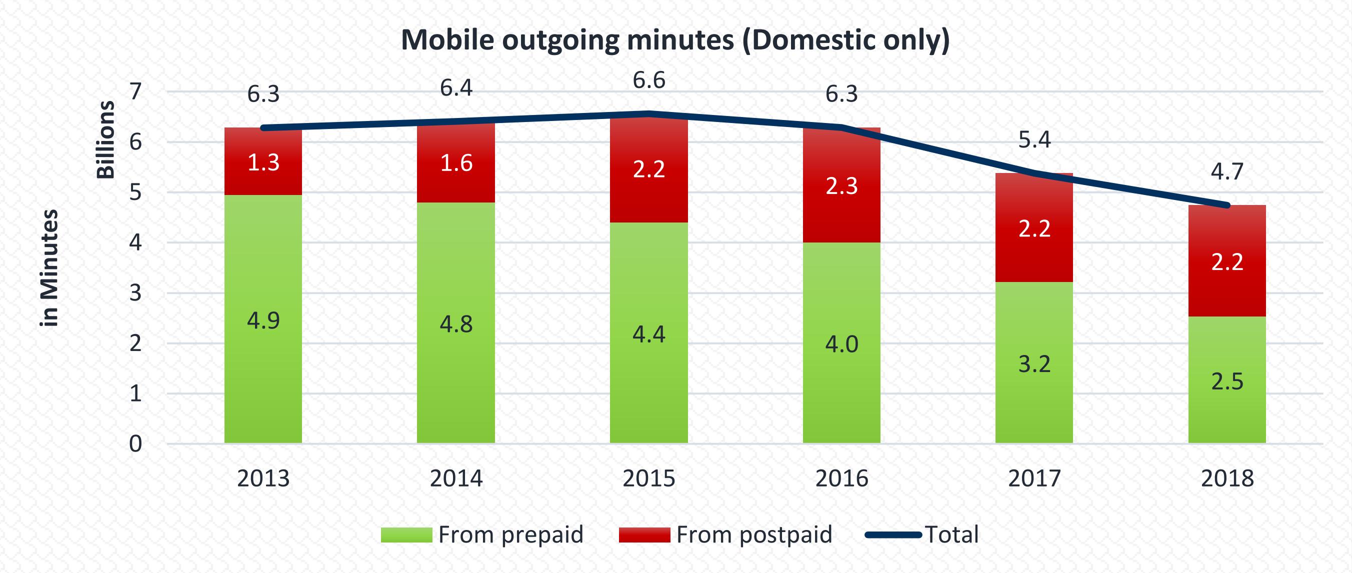
- At the end of Q2 2019, there were 1.67 million mobile subscribers with mobile data subscription (pay per use, add-on and bundles) compared to 1.24 million subscribers in Q2 2014 (Increased by 34%).
- Active mobile broadband subscriptions (pay per use, add-on and bundles) represent 80% of total mobile subscriptions at the end of Q2 2019 compared to 69% of total mobile subscriptions at the end of Q2 2018.

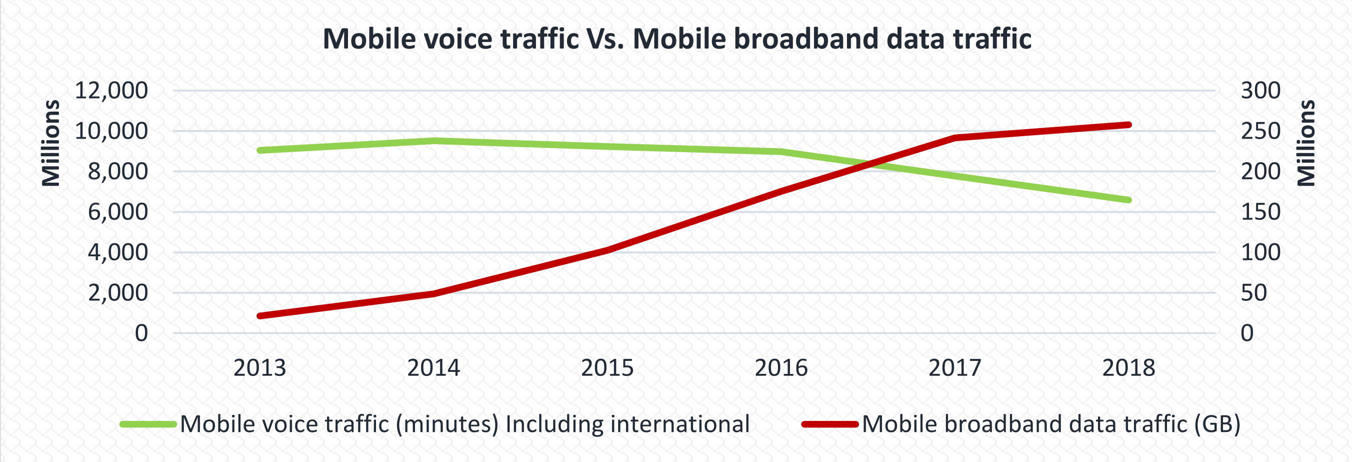


*(Pay per use, Add-on and Bundles)

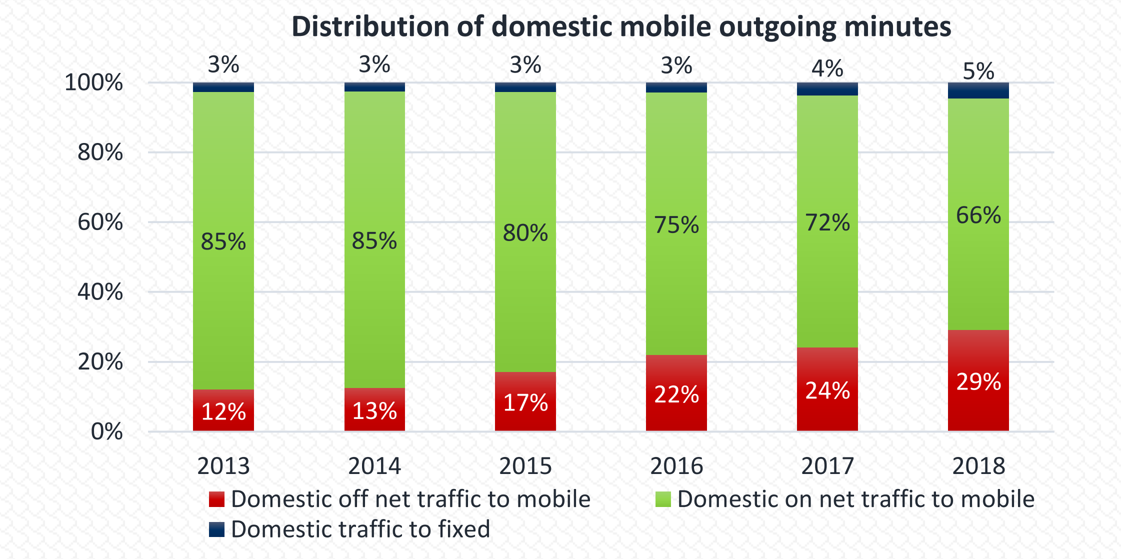
MOBILE TRAFFIC

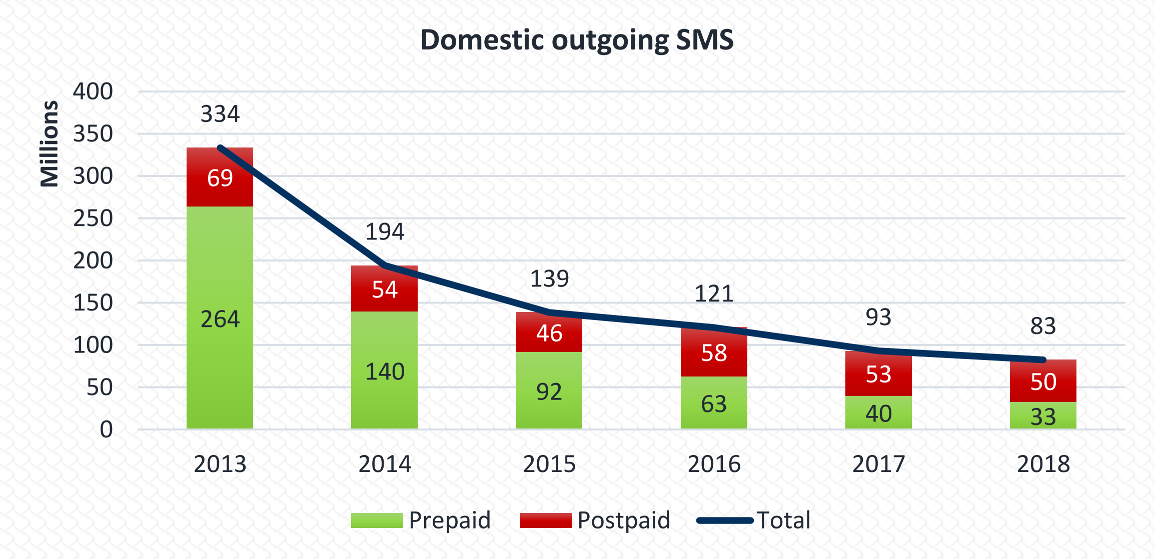
- At the end of Q4 2018, mobile generated 4.7 billion domestic minutes, representing a reduction of (12%) compared to the previous year (2017).
- The compound annual growth rate is (7.25%) in domestic mobile originated traffic between 2014 and 2018.
- Comparing 2018 to 2017, the domestic postpaid mobile outgoing minutes increased by 3%, while the traffic originated from prepaid decreased by (21%), which was mainly due to the increase in percentage of postpaid subscribers.
- While total mobile voice traffic (including international calls) decreased by 15%, data traffic increased by 6.7% compared to 2017.





MOBILE TRAFFIC



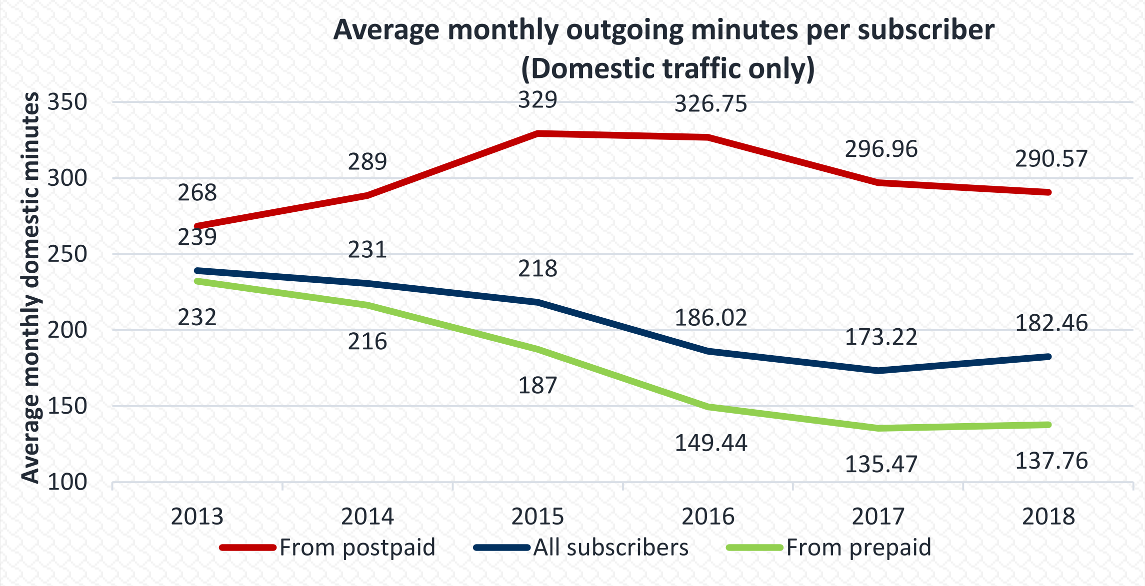


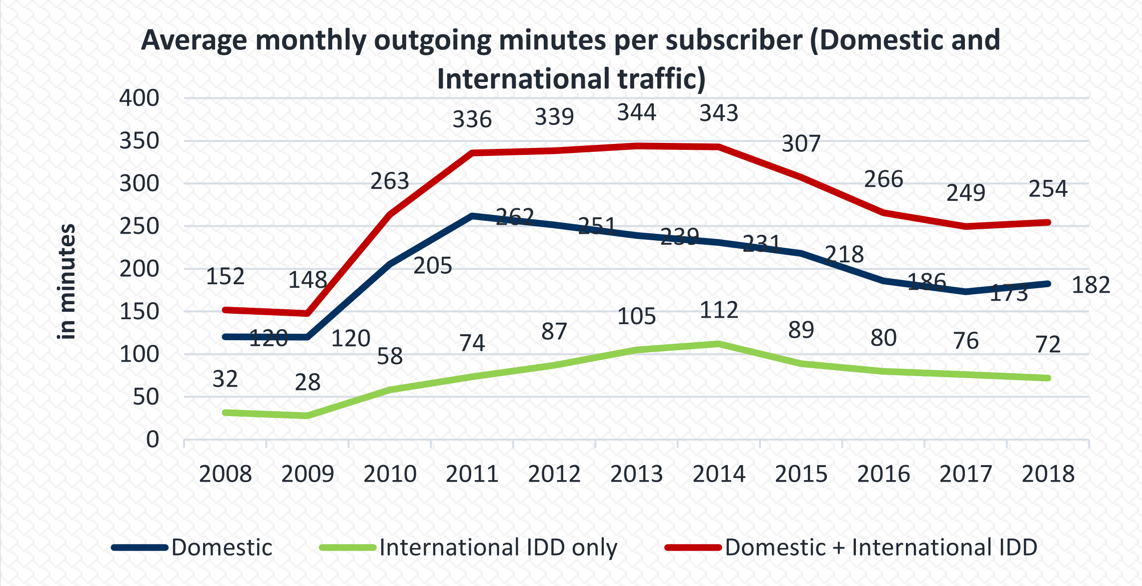
- In 2018, domestic mobile originated on-net traffic decreased further to reach 66% compared to 72% in 2017.

- In 2018 the off-net voice traffic has increased further to reach 29% compared to 24% during 2017, one driver of this increase is the new mobile packages which removed unlimited on-net calls and increased free-local minutes.

- Increase use of over-the-top (OTT) services/applications (e.g. WhatsApp) has led to further decline in total SMS as it dropped by (11%) between 2017 to 2018 mainly due to the increase in mobile data services/applications (e.g. Snapchat, WhatsApp).

MOBILE AVERAGE MONTHLY OUTGOING MINUTES

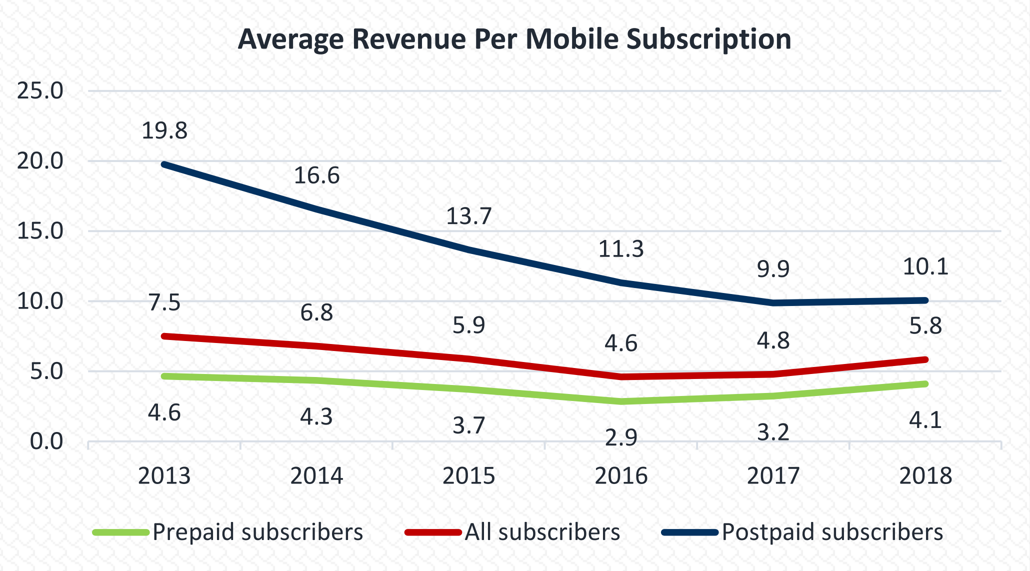


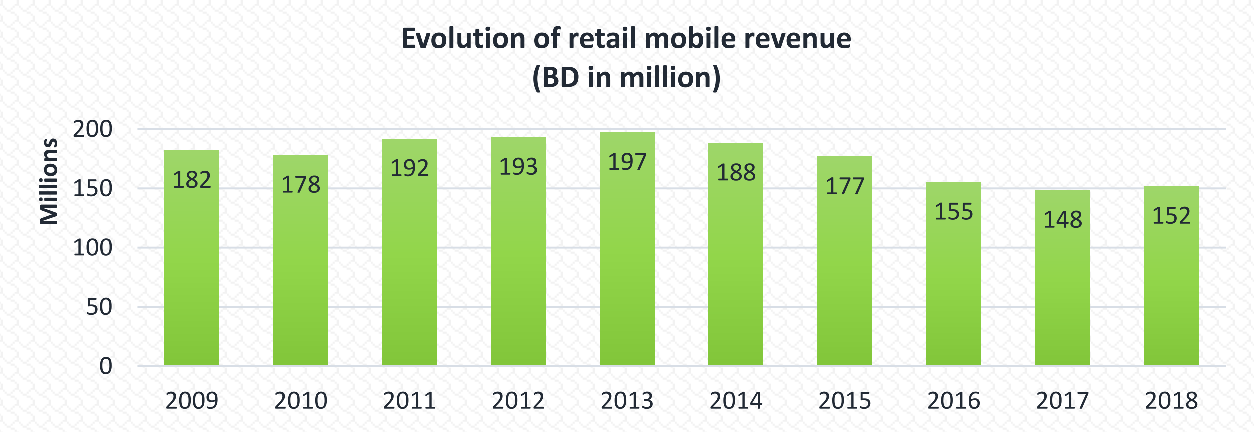


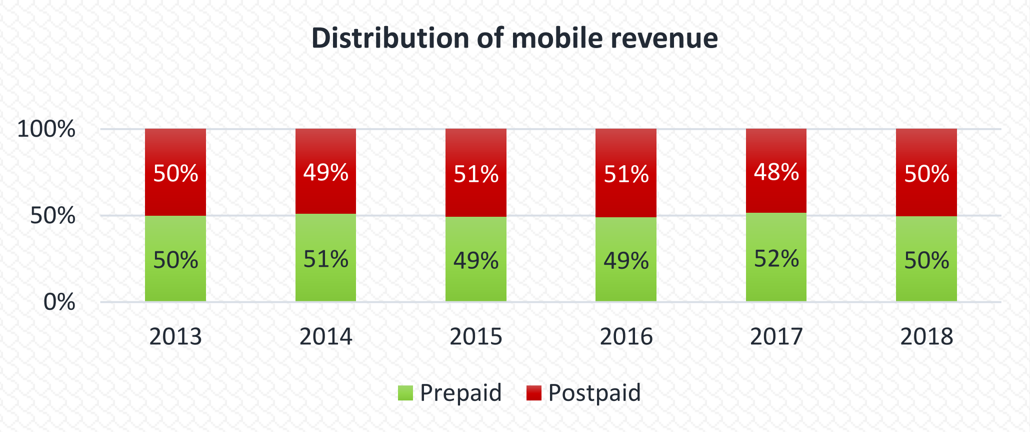
- As shown in the figures, the average monthly domestic traffic (in minutes) for postpaid subscribers slightly decreased from 296.7 minutes in 2017 to 290.6 minutes in 2018, a decrease of (2%).
- The average monthly domestic traffic (in minutes) for prepaid customers increased from 135 minutes in 2017 to 137.7 minutes in 2018, an increase of (2%).
- The average monthly volume of international direct dial (IDD) calls has decreased by (6%) between 2017 and 2018 from 76 minutes in 2017 to 72 minutes in 2018.

MOBILE REVENUE

- Between 2017 and 2018, Mobile revenue grew by 2.3% as it reached BHD152 Million.
- Revenue generated from postpaid mobile subscriptions represented 50% of the total retail mobile revenue in 2018.
- ARPU for postpaid subscribers has increased by 1.8% compared to 2017. Similarly, prepaid ARPU has also increased between 2017 to 2018 by 26.9%. Overall, Mobile ARBU increased by 2%.







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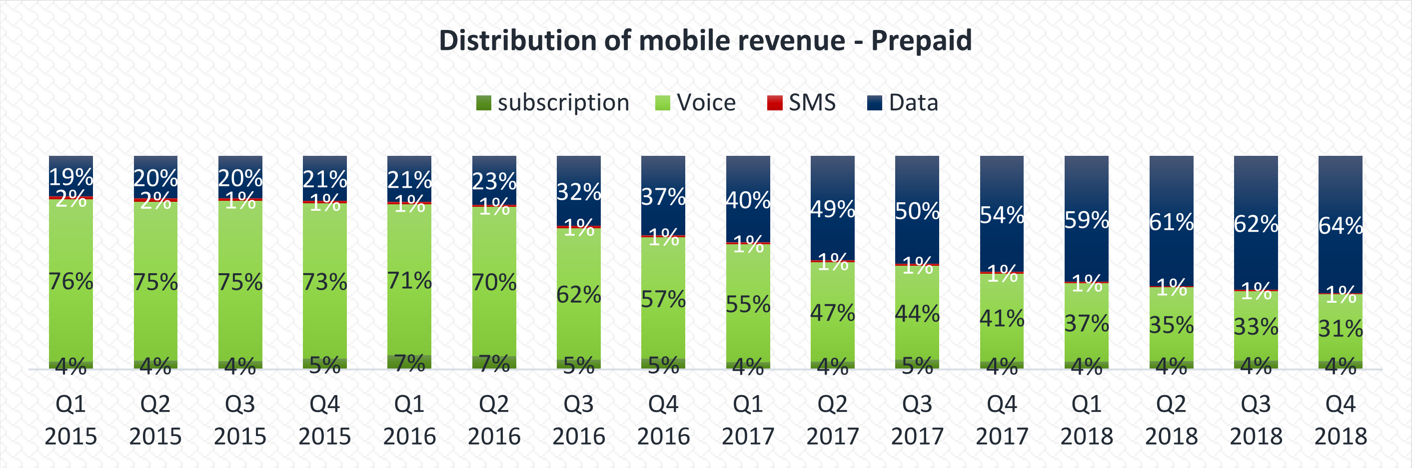
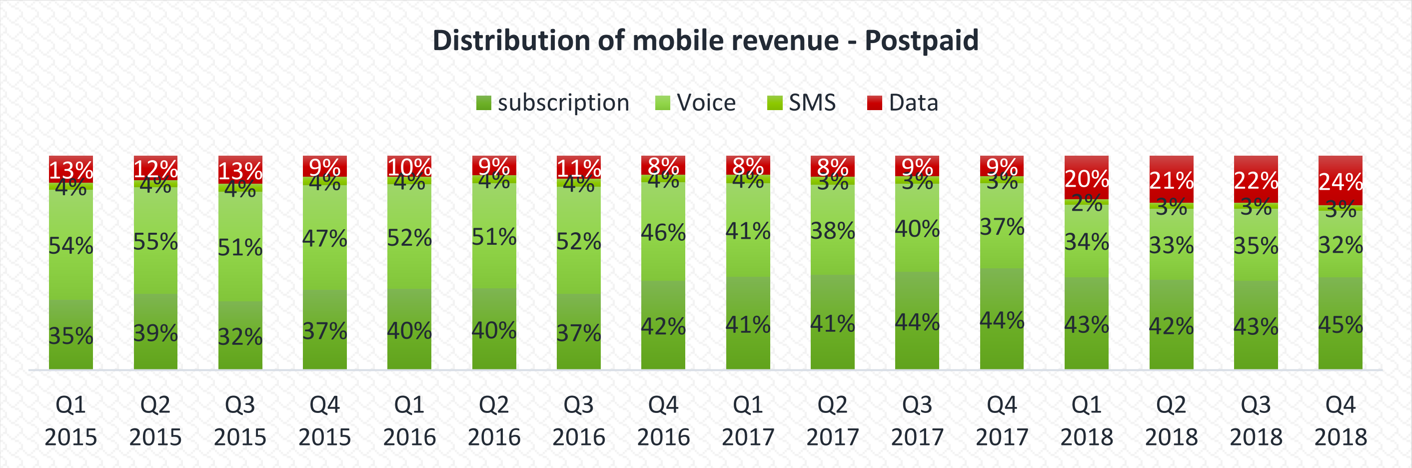
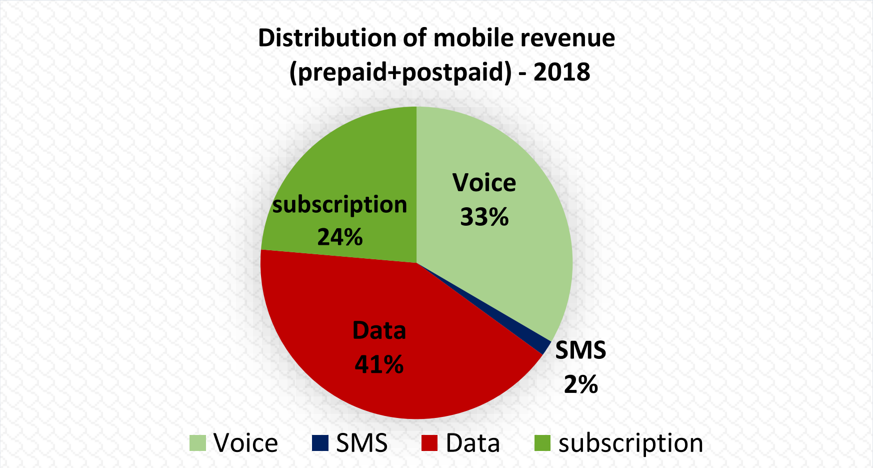
DISTRIBUTION OF MOBILE REVENUE

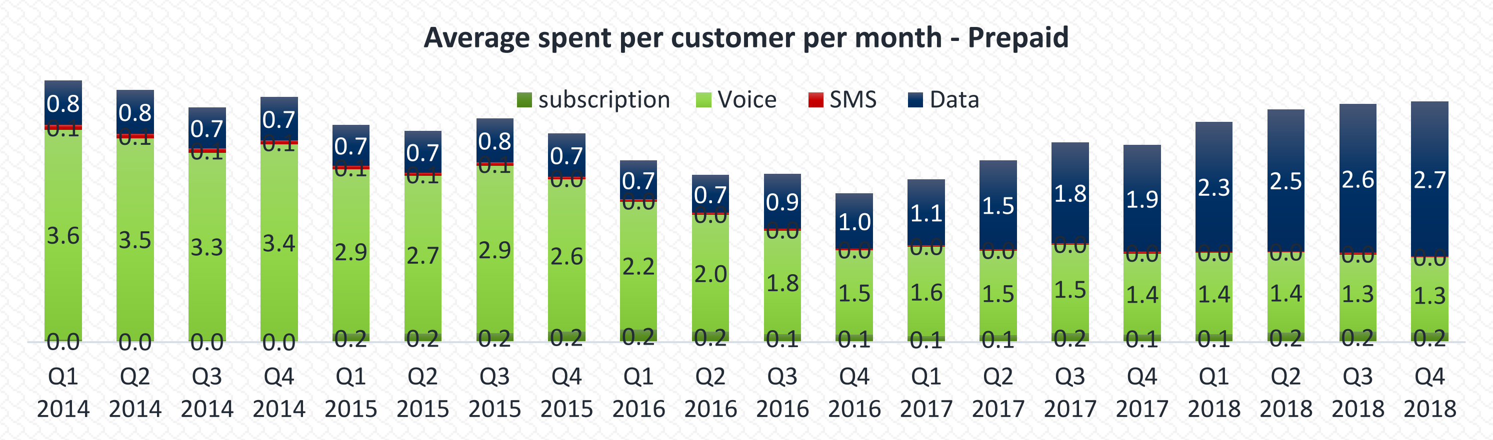


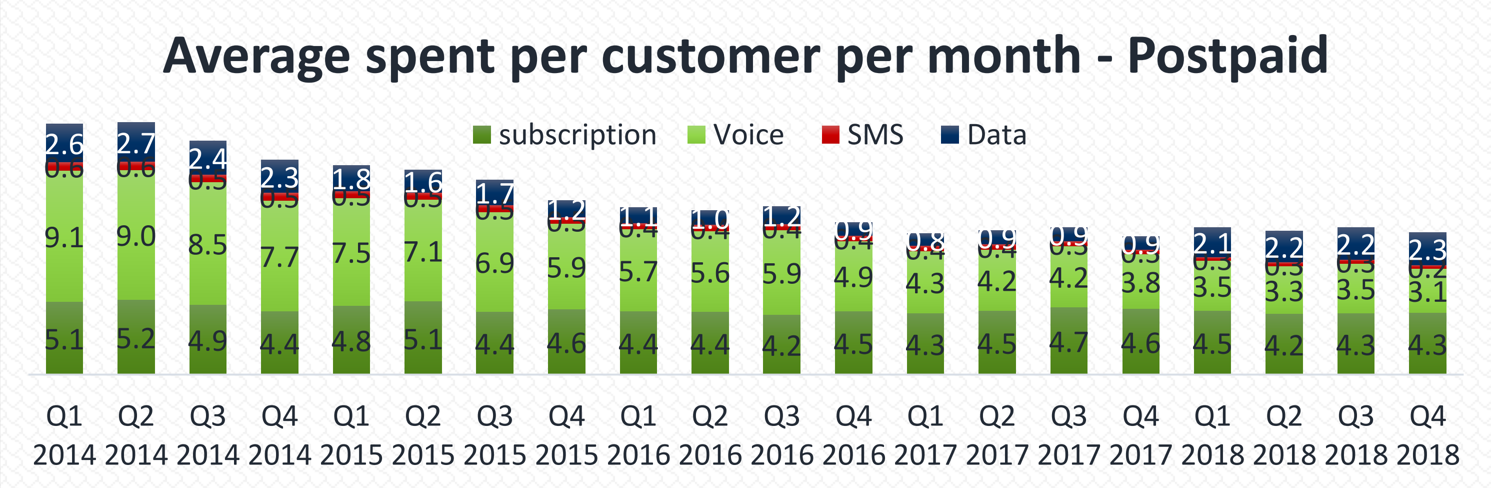
- In general, voice services continue to be the main source of revenues for mobile operators, despite the decrease of voice revenues, followed by data which exhibited a continuing increase.
- In 2018, prepaid data revenue has become the main source of revenue generating 64% in Q4 2018, at the same time voice revenue declined to 31% from 41% in Q4 2017.
- For postpaid, Data became the main source of revenue increasing to 41% in Q4 2018 compared to 30% in Q4 2017. Meanwhile, Voice has decreased to 33% and Subscription remained at 24%.





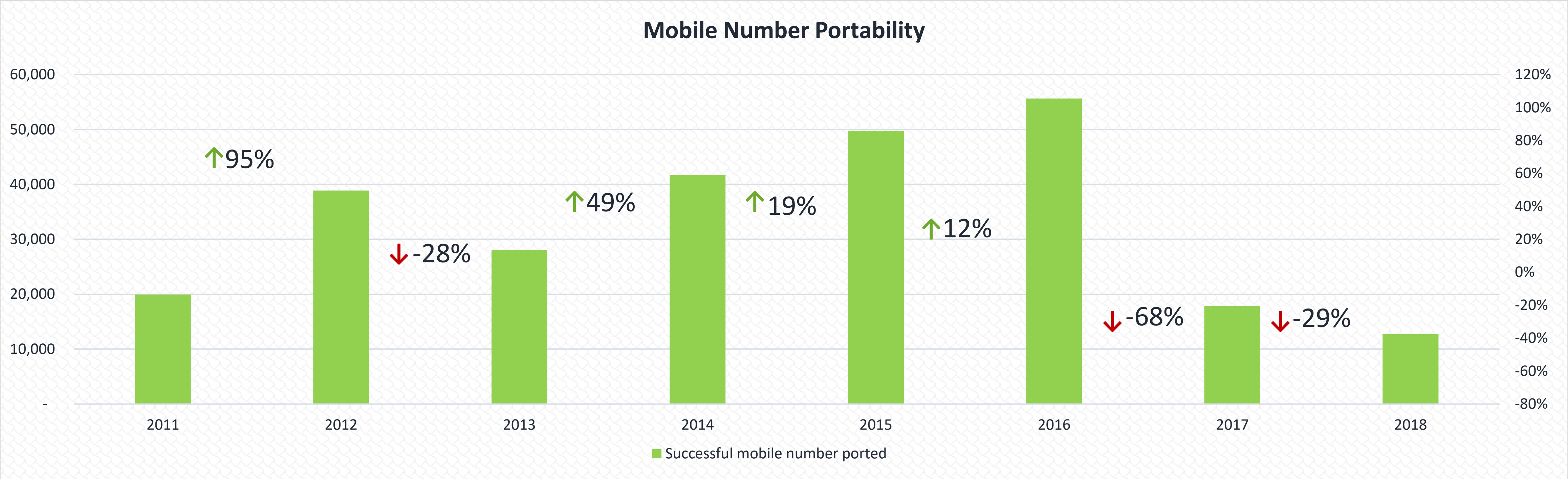
MOBILE AVERAGE SPEND PER SUBSCRIBER PER MONTH





- During Q4 2018, prepaid subscribers spent BD 4.2 monthly for their subscription, phone calls, SMS and data, comparing to BD 3.4 spent on the same services during Q4 2017.
- While in Q4 2018, postpaid subscribers spent BD 9.9 monthly for the same services comparing to BD 9.6 during Q4 2017.
- For prepaid subscribers, the average monthly spend per subscriber for voice decreased from BD1.4 during Q4 2017 to BD 1.3 during Q4 2018, at the same time, data revenue increased from BD1.9 to BD2.7, indicating a shift in the source of revenue.
- During Q4 2018, the average monthly spend per postpaid subscriber for data increased to BD 2.3 while voice revenue has decreased from BD 3.8 in Q4 2017 to BD 3.1 in Q4 2018, a decrease of 18%.

MOBILE NUMBER PORTABILITY



- The volume of mobile numbers successfully ported decreased substantially. By the end of 2018, the successful mobile number ported were 12,718, a slight decrease compared to 17,846 in 2017, which was the lowest figure since the introduction of mobile number portability in Bahrain.

- A total of approximately 264,448 mobile numbers had been ported successfully since the introduction of number portability in July 2011.

INTERNATIONAL OUTGOING MINUTES

INTERNATIONAL OUTGOING MINUTES

- During 2018 international outgoing minutes have dropped further to reach 1,995 million minutes comparing to 2,444 million minutes during 2017.

- OTT continue to place competitive pressure on traditional voice service provider as evident by the consecutive drops.

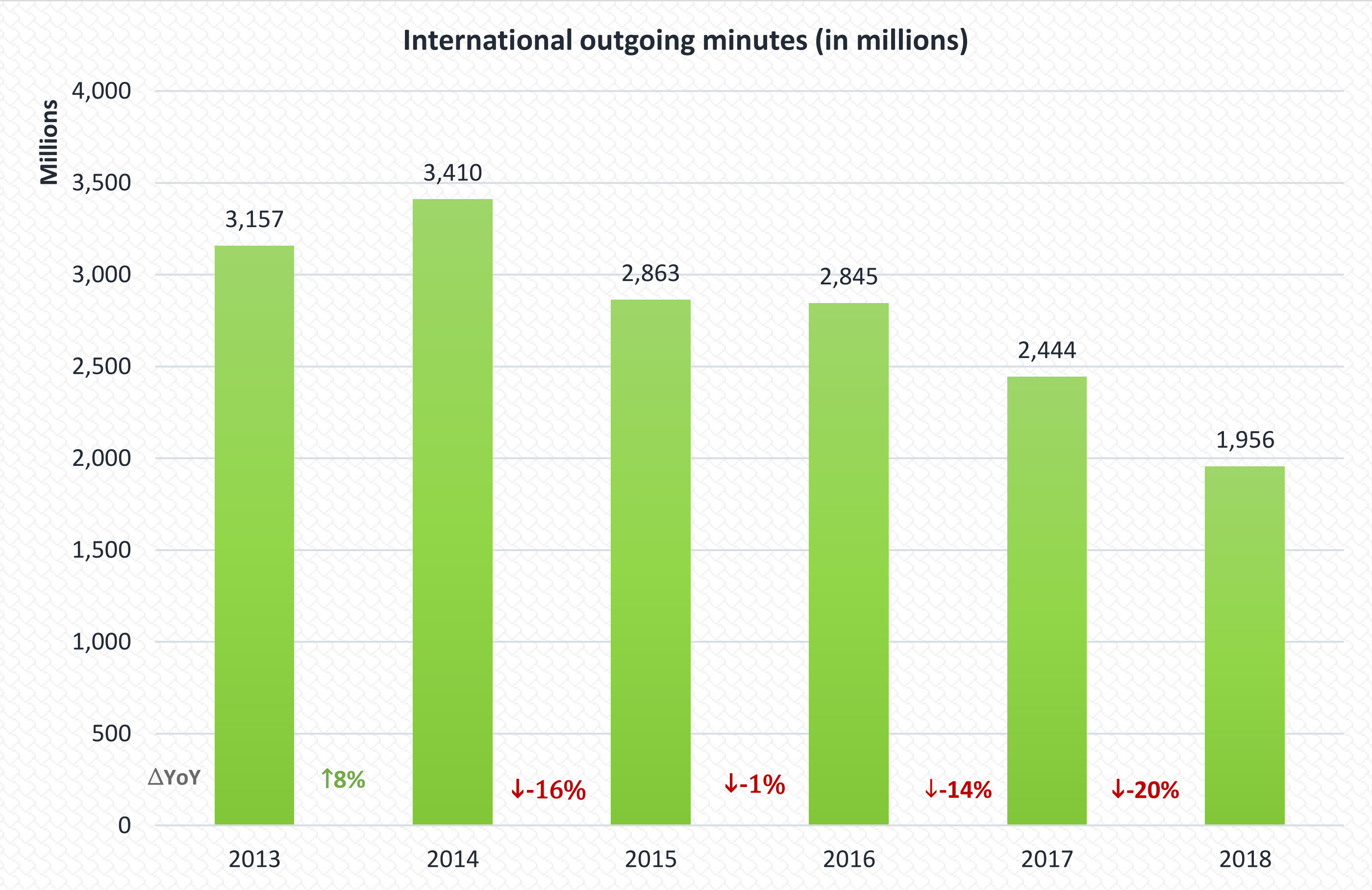
2018		
	1,955,863,052	**International outgoing minutes**
	96%	**of calls originated from mobile**
	92%	**of outgoing traffic went to Zone 2**

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.



INTERNATIONAL OUTGOING MINUTES

- International outgoing minutes dropped by (20%) between 2017-2018 and International calls revenue also decreased by (30.9%) over the same period.
- This decline indicates ongoing competitive pressure on pricing, as well as change in the overall subscribers' behavior and usage.

International outgoing minutes

Minutes (in millions)	2014	2015	2016	2017	2018	% Change 2017-2018
GCC	104.3	79.9	70.8	65.3	58.7	(10%)
Zone 2	3,060	2,562	2,606	2,259	1,805	(20%)
Zone 3	66.4	63.9	48.7	35.6	32.9	(7.6%)
Zone 4	177	157.7	120.3	84	58.6	(30%)
Total	**3,410.3**	**2,833**	**2,845.5**	**2,443.9**	**1,995**	**(20%)**

International calls revenue

Revenues (BD in millions)	2014	2015	2016	2017	2018	% Change 2016-2017
GCC	11.00	8.6	6.7	5.2	4.48	(14%)
Zone 2	48.78	41.7	30.2	20.26	12.2	(39.4%)
Zone 3	5.2	4.3	3.5	2.38	1.93	(19%)
Zone 4	11.69	8.8	6.6	4.9	3.97	(19.5%)
Total	**76.67**	**63.2**	**47**	**32.7**	**22.6**	**(30.9%)**

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

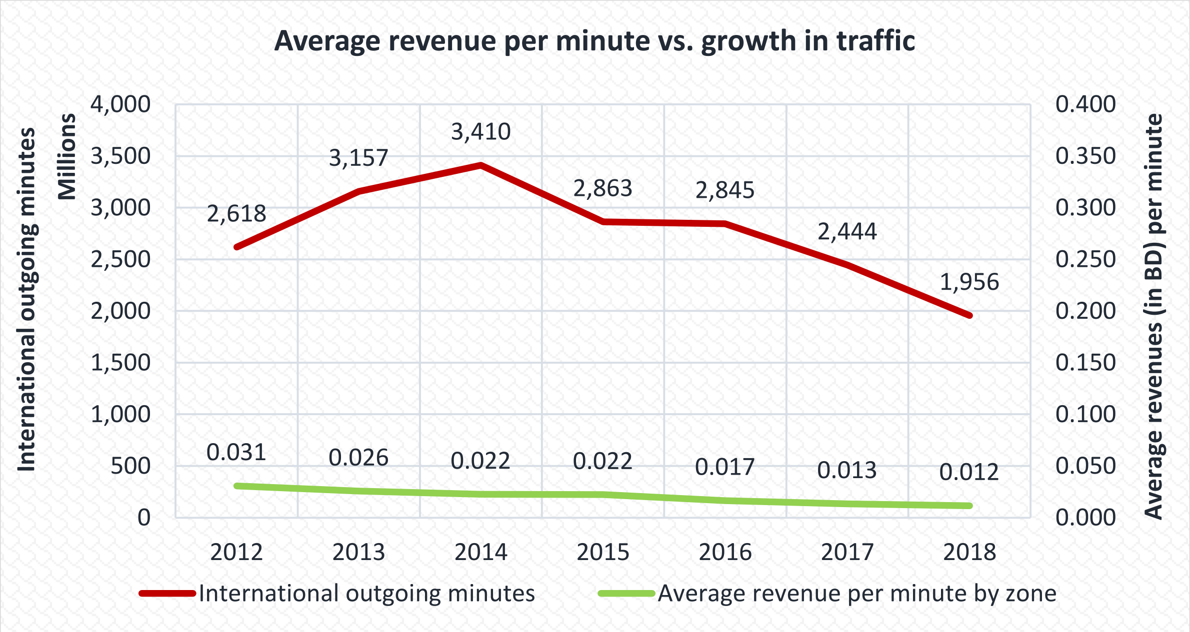
Zone 2: Calls to South Asian countries (Bangladesh, India, Pakistan, the Philippines and Sri Lanka).

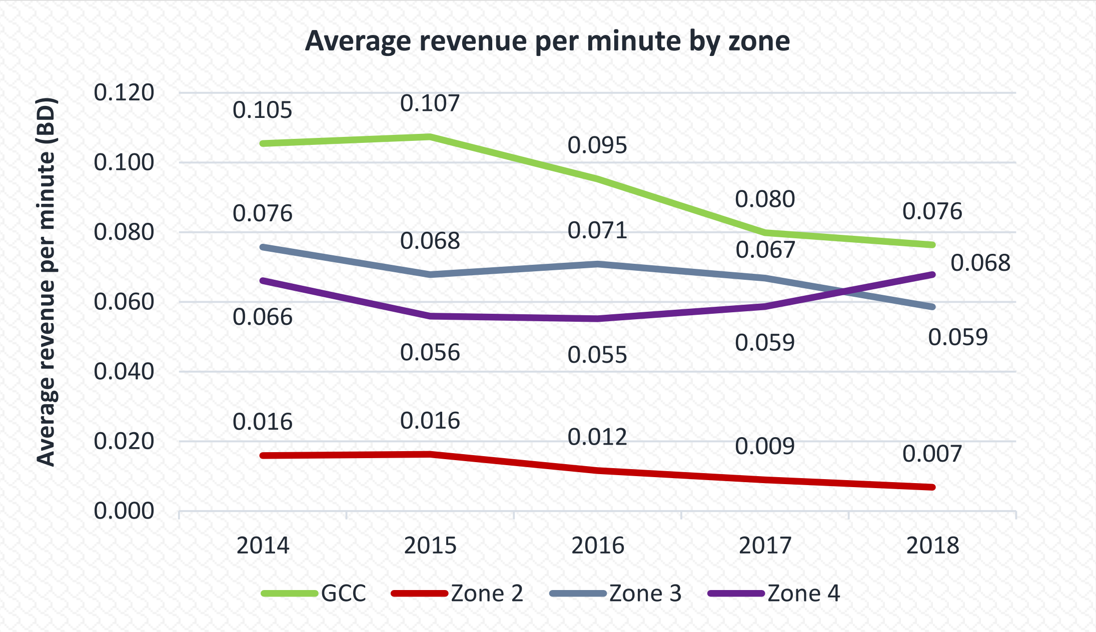
Zone 3: Calls to other major destinations (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, UK, USA and Yemen).

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 38% from 2013 to 2018.
- Despite the substantial decrease in traffic, the average revenue per minute dropped by (19%) between 2016 and 2017.
- In comparison to 2017, the biggest decrease in average revenue per minute in 2018 was mainly from Zone 2 followed by Zone 3, (24%) and (12%) consecutively.





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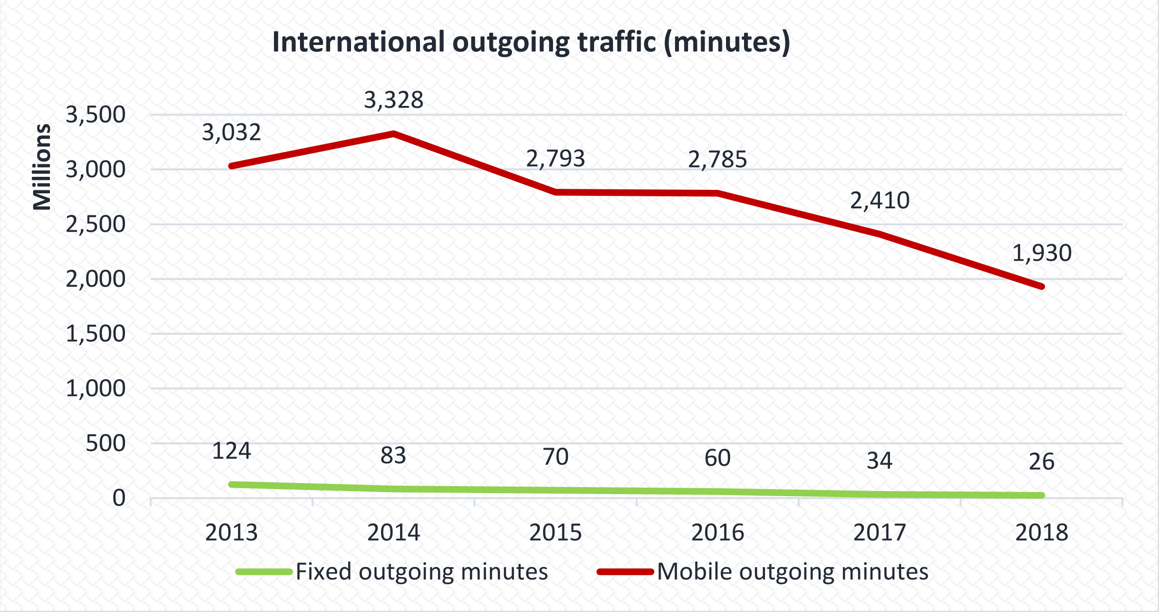
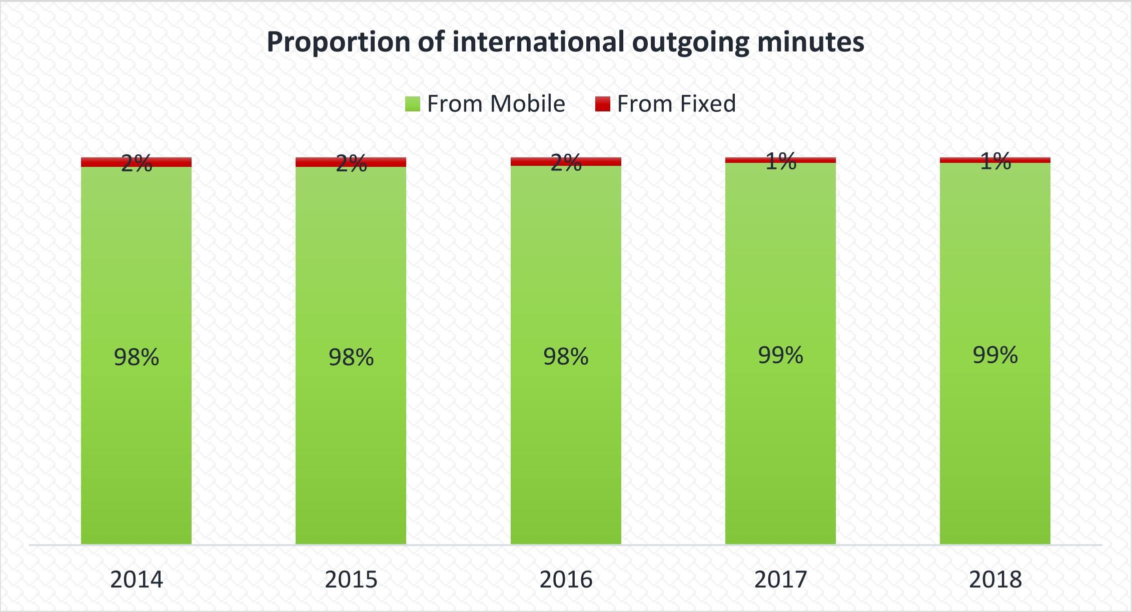
INTERNATIONAL OUTGOING MINUTES





- In 2018, International outgoing minutes originated on mobile1 decreased by (19.9%) compared to 2017, while minutes originated on fixed fell by (23%) over the same period due to significant decrease in calls originated from prepaid card.
- International outgoing minutes originated on mobile represented 99% of the total international outgoing minutes in 2018.

[1]Minutes including prepaid calling card traffic..

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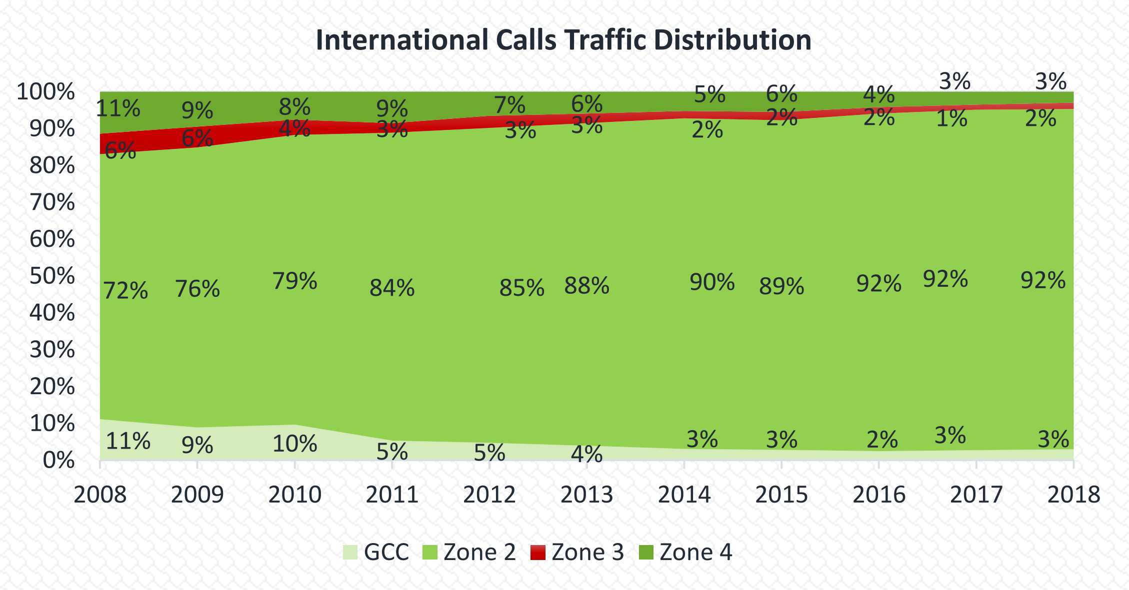
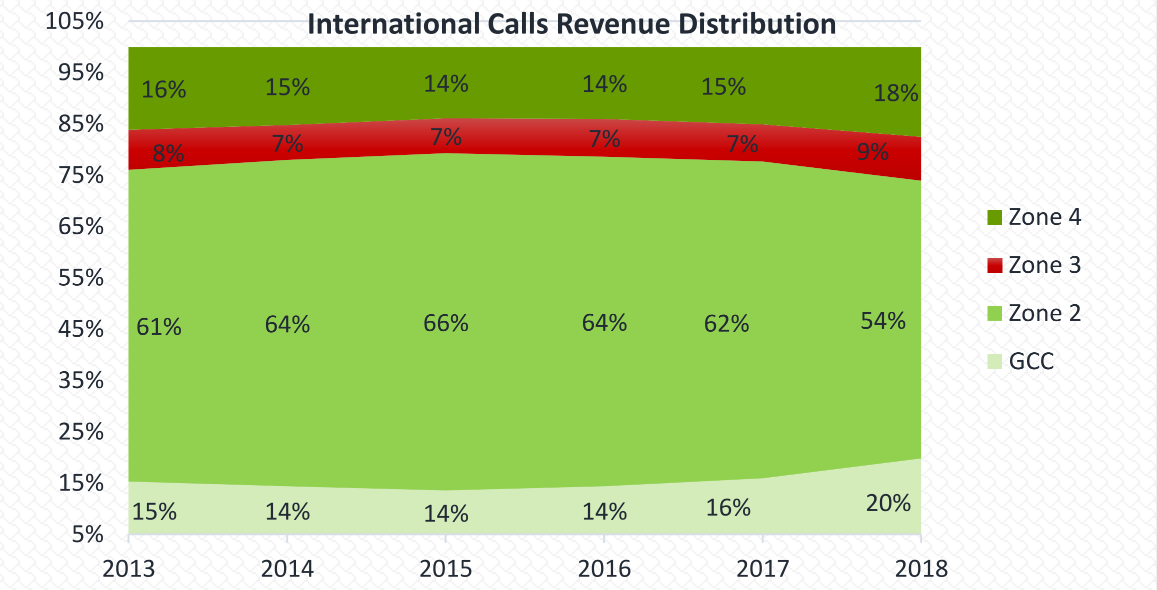
INTERNATIONAL TRAFFIC VS. REVENUES BY DESTINATION CALLED

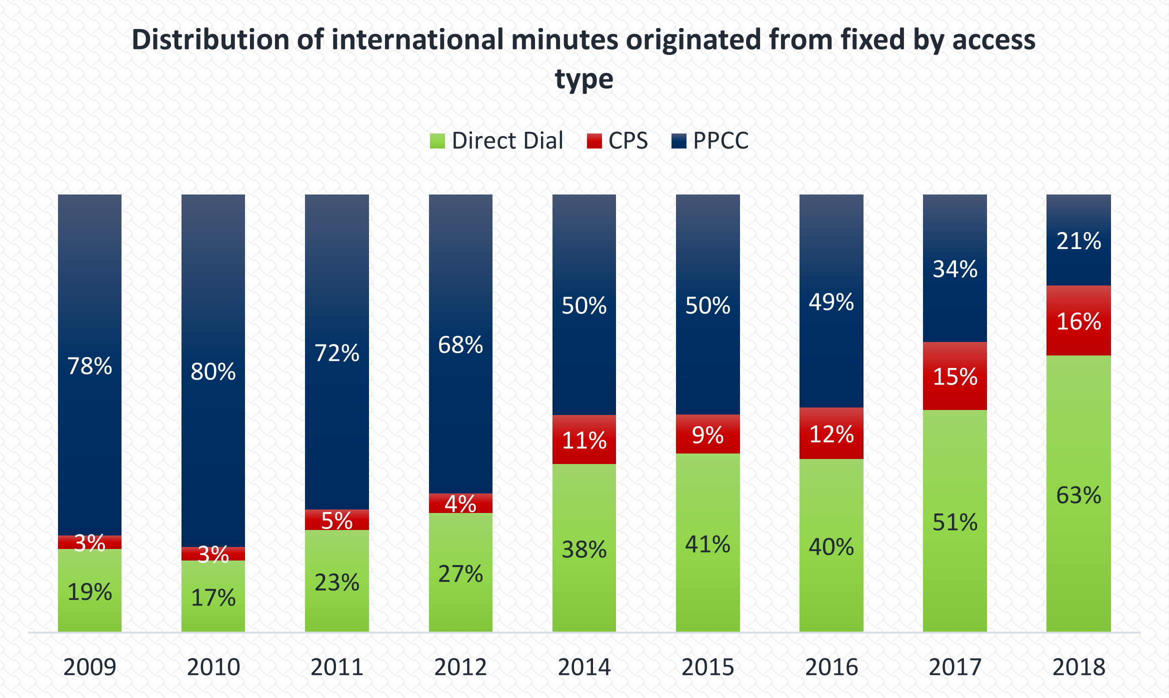


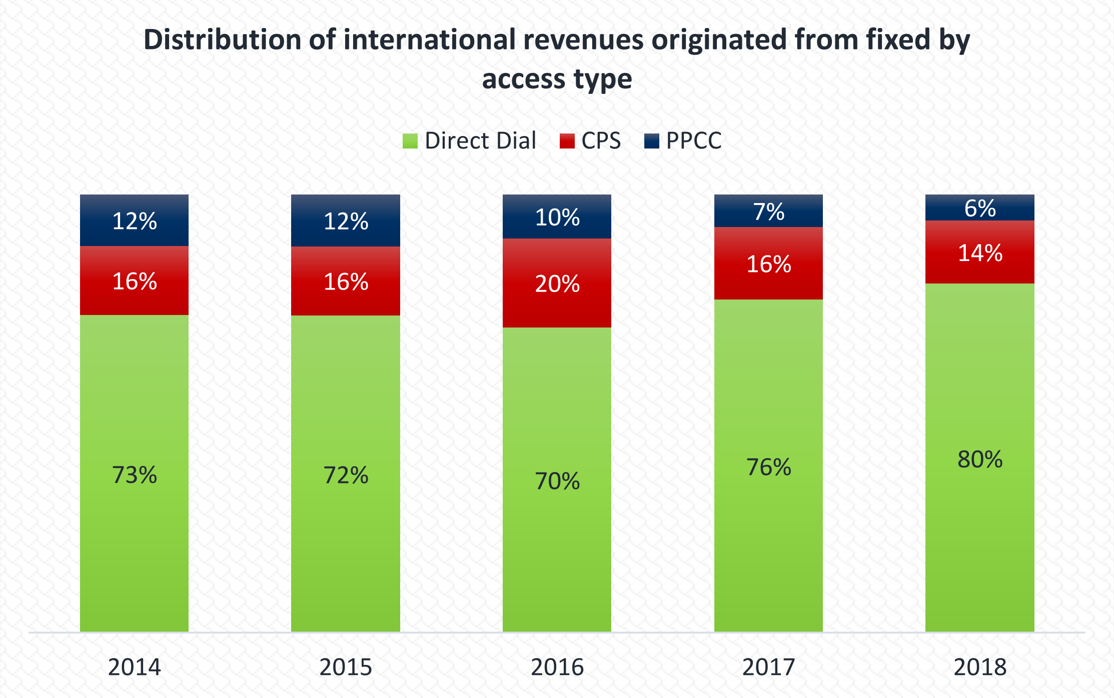


- 92% of total international calls **minutes** were made to Zone 2 (South Asian countries) in 2018.
- 54% of international **revenues** were generated from calls to Zone 2 (South Asian countries) in 2017.

- The average revenue per minute earned from calls to South Asian countries (Zone 2) continues to be relatively low.
- By end of 2018, the total international voice traffic in minutes was 1,955,863,052 with revenue of BD 22,624,195.

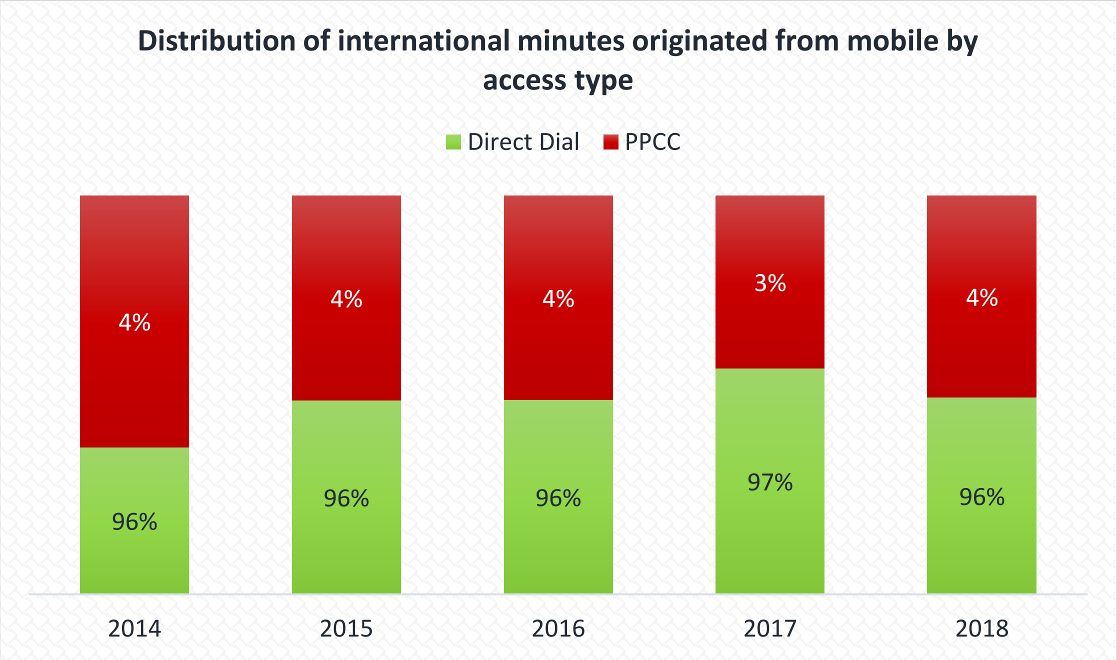
DISTRIBUTION OF INTERNATIONAL OUTGOING MINUTES/REVENUES BY ACCESS TYPE - FIXED TELEPHONY

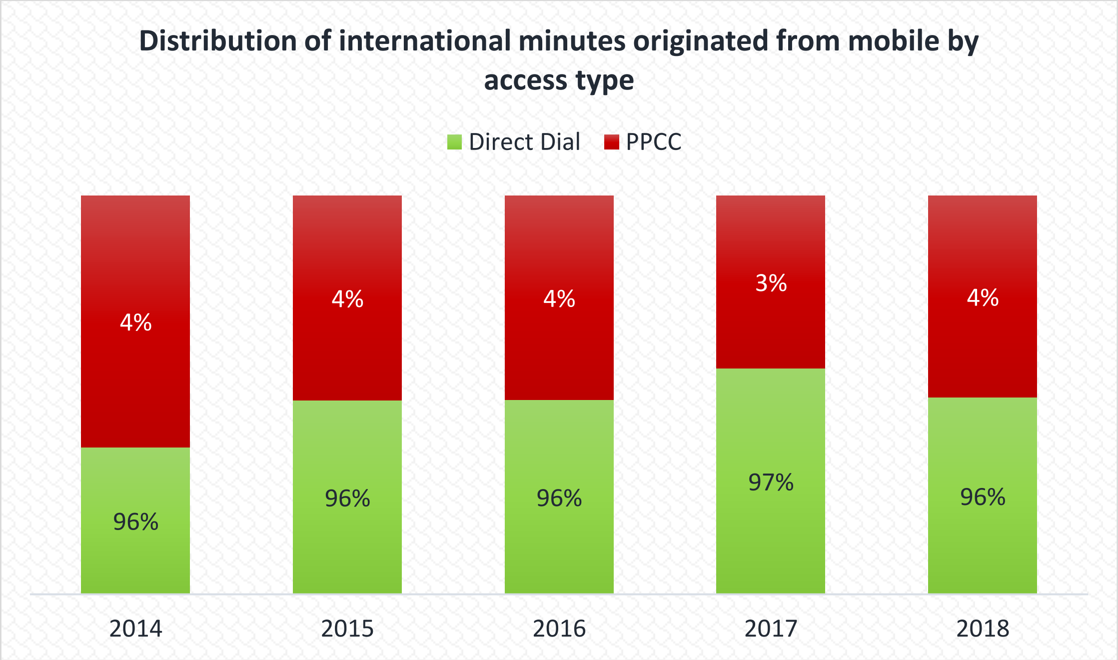




- While the CPS has 16% only from total fixed originated minutes on 2018, its revenue has represented 14% of total fixed telephony traffic revenues.
- At the same time, percentage of revenue from direct dial in 2018 increased from 76% to 80%.

DISTRIBUTION OF INTERNATIONAL OUTGOING MINUTES/REVENUES BY ACCESS TYPE - MOBILE





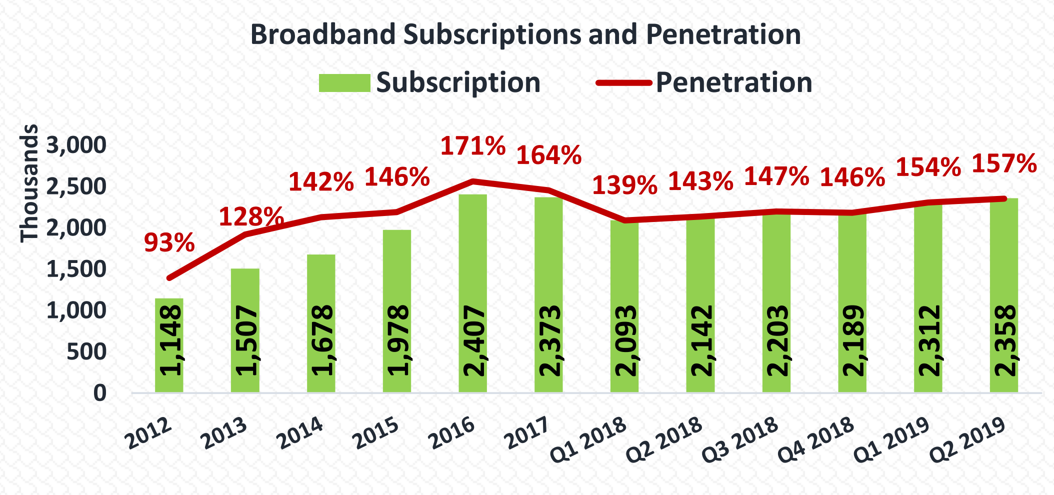
- In 2018, international direct dial traffic originated from mobile represented 96% of the total traffic, similar to years 2014 - 2016. The pricing of mobile-originated international direct dial services has become even more competitive in recent years.
- The direct dial represented 96% of total revenues originated from mobile.

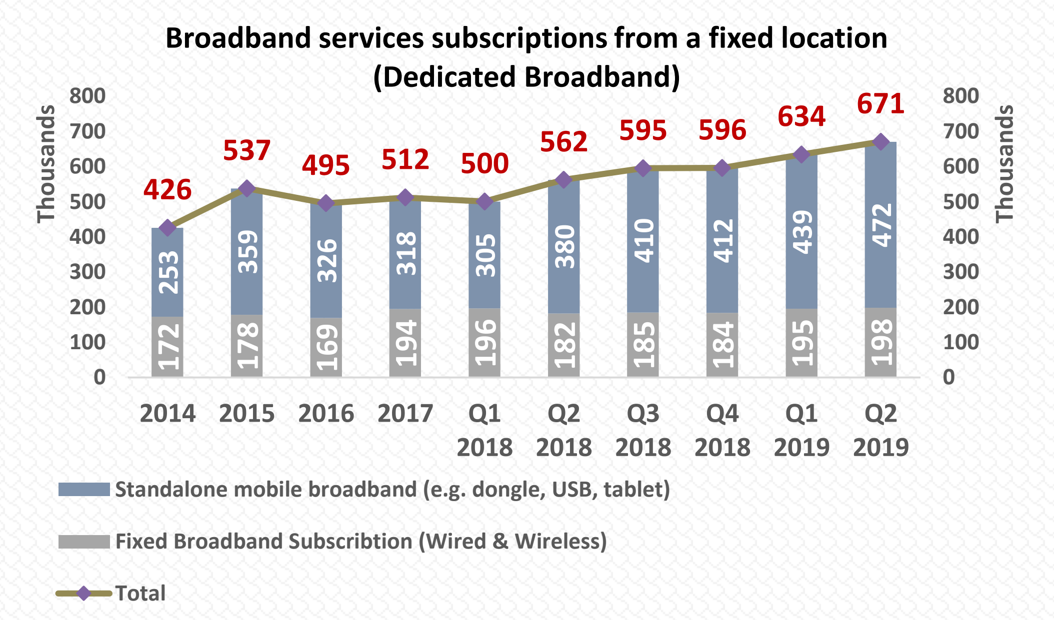
BROADBAND SERVICES

BROADBAND SERVICES

- At the end of Q2 2019, there were approximately 2.36 million broadband subscriptions compared to 2.19 million at the end of 2018 (8% increase), representing a broadband penetration of around 157%.
- In comparison to the end of 2018, penetration rate has increased further due to an increase in subscription and decrease in population base.
- Broadband subscription growth continues to be driven by growth in the number of mobile broadband subscriptions as it represented 91.6% of total broadband subscriptions at the end of Q2 2019.
- At the end of Q2 2019, there were 670.56 thousand subscriptions for dedicated broadband services.

End of Q2 2019		
	2,357,985	Broadband subscription
	157%	Penetration rate
	91.6%	Mobile broadband subscriptions



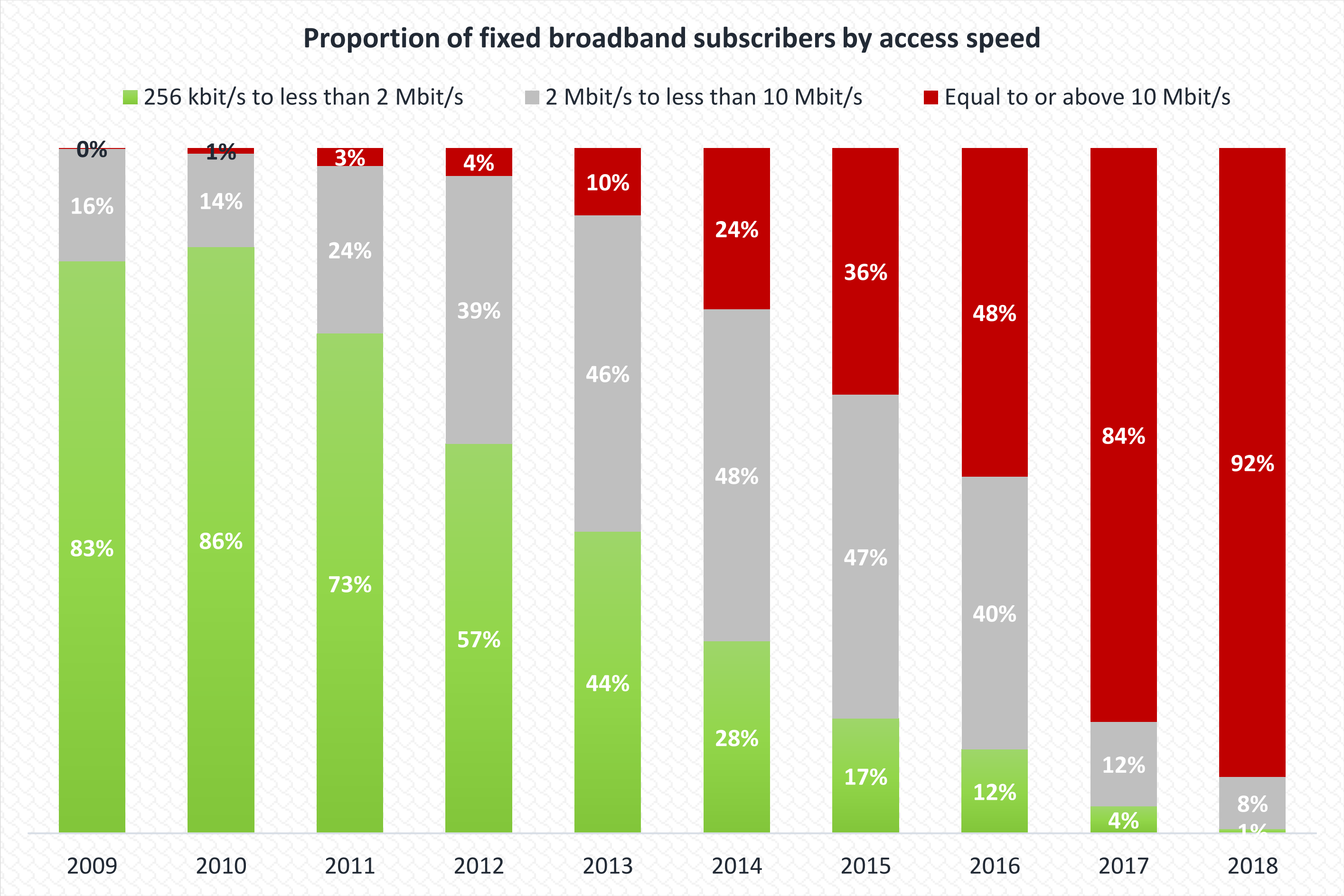


*In Dec 2018, an operator revised the number of Mobile broadband subscribers which led to a drop in the total number of Mobile broadband subscribers.

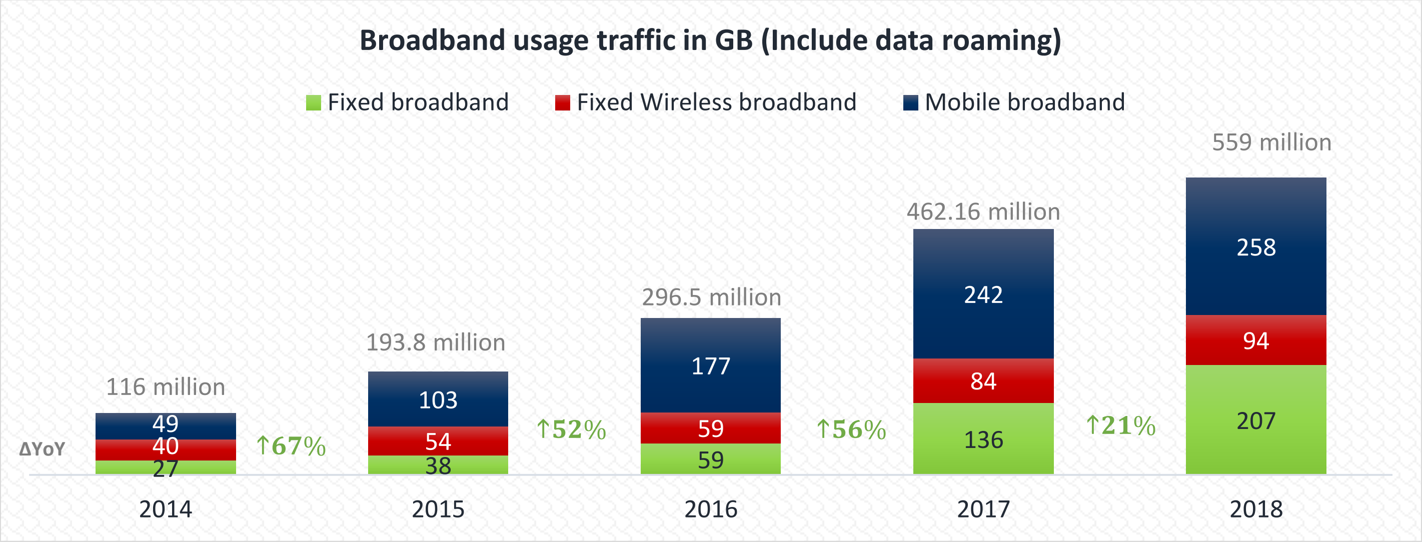
PROPORTION OF BROADBAND SUBSCRIBERS BY ACCESS SPEED

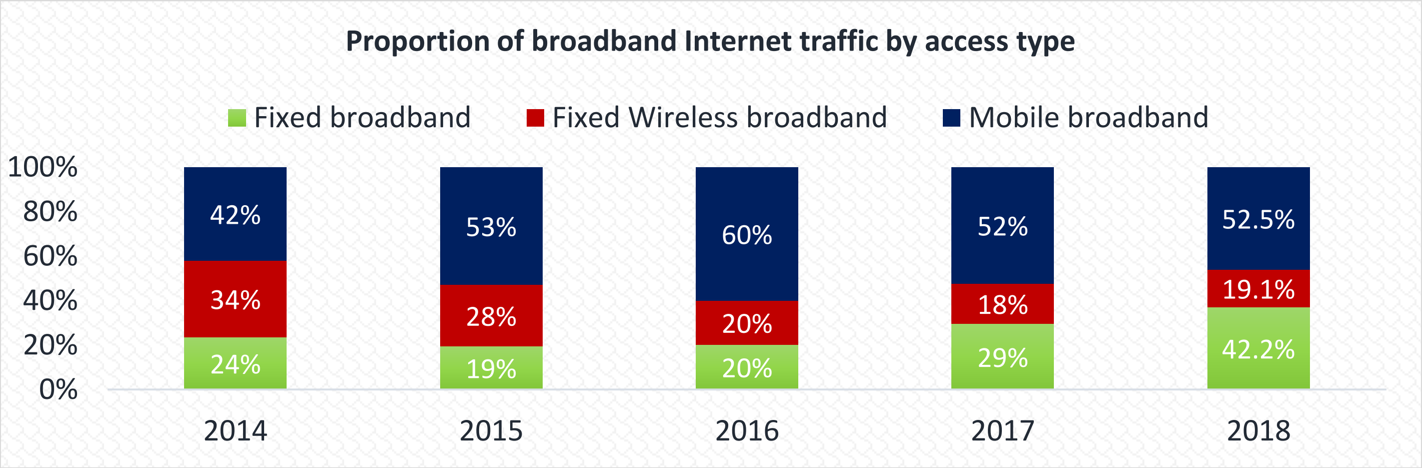
- By the end of 2018 nearly 92% of fixed broadband subscribers were on plans with advertised speeds of 10 Mbps and above compared to only 10% in 2013.

- This indicates the increased use of subscribers for services that require a higher speed plus the affordability of the prices of higher speed packages.



BROADBAND USAGE





- In 2018 total broadband usage reached about 559 million GB compared to 116 million GB in 2014 (382% increase between 2014 and 2018)
- Between 2014 and 2018, Mobile broadband usage increased by 1052%.
- The traffic (in GB) generated from mobile broadband represented 52.5% of the total broadband usage in 2018, compared to 42% in 2014. This increase in Mobile Broadband traffic is being driven by the growing number of mobile subscribers, particularly smartphone users.
- Between 2017 and 2018, fixed wired broadband usage increased by 52%, fixed wireless usage increased by 11.5%, and mobile broadband usage increased by 6.8%.

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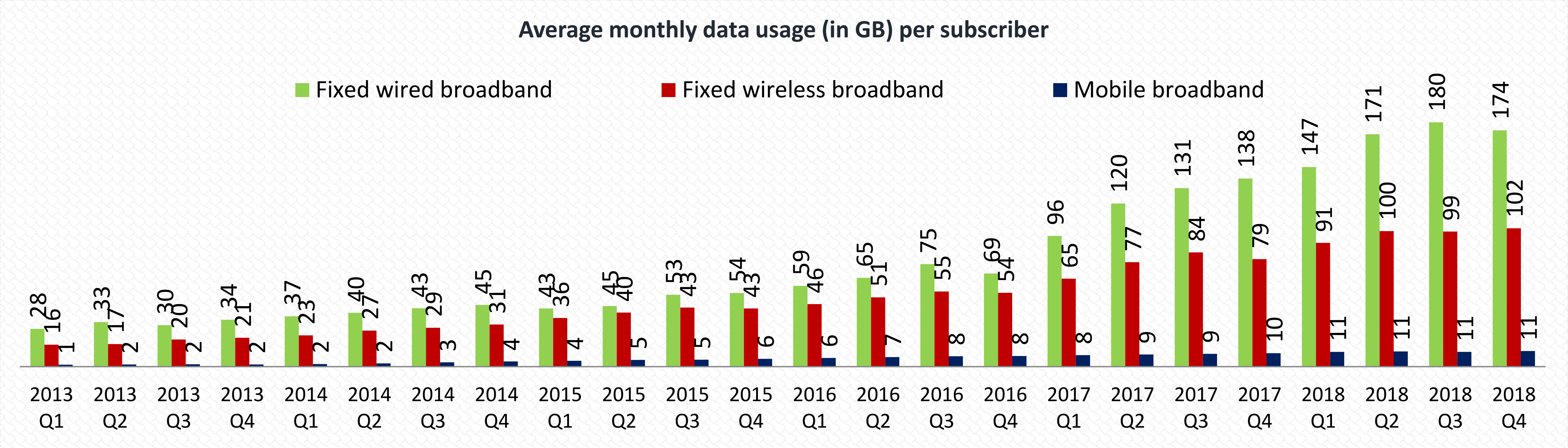
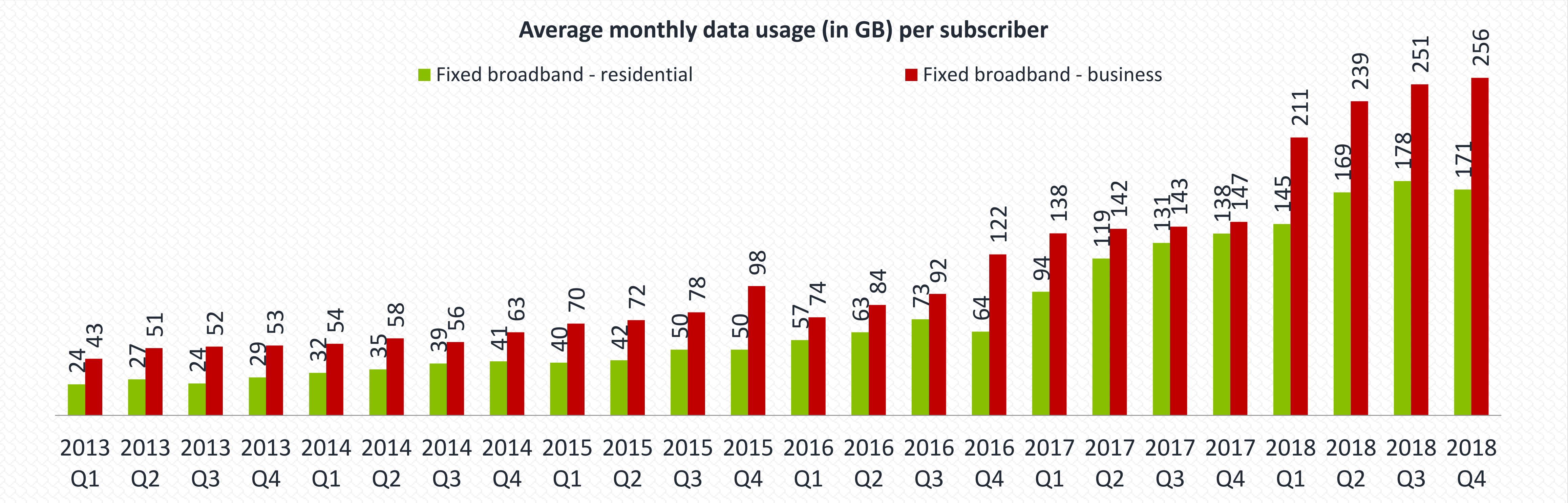
AVERAGE USAGE (IN GB) PER BROADBAND SUBSCRIPTION



- 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. 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).

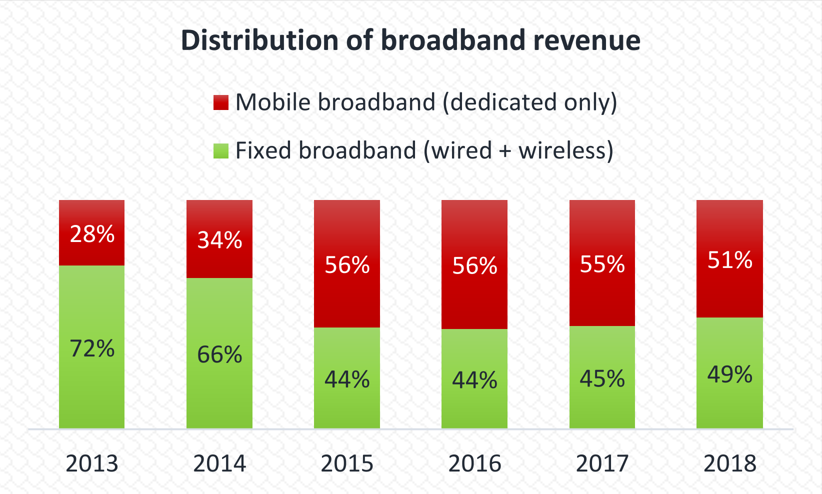
AVERAGE USAGE (IN GB) PER BROADBAND SUBSCRIPTION

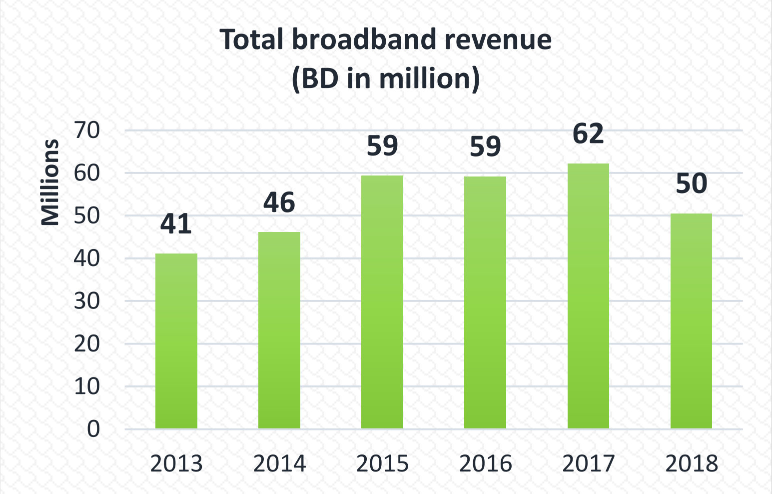


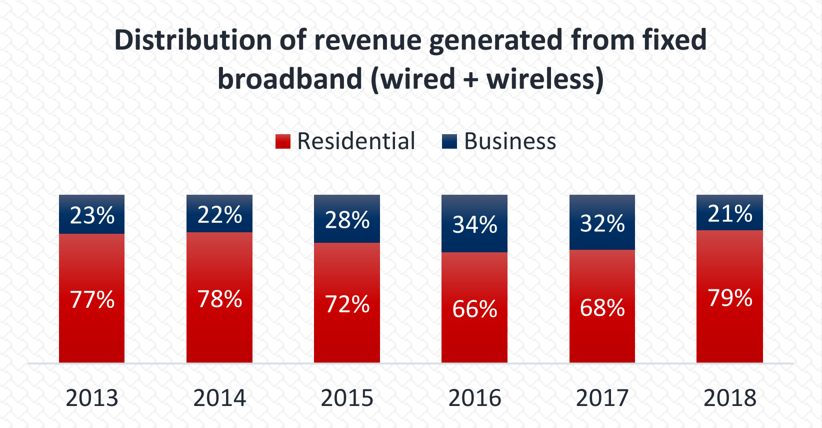
- Fixed broadband subscription continue to increase in monthly usage in 2018. Comparing Q4 2018 to Q4 2017, usage per month for residential fixed broadband subscribers increased by 19%.

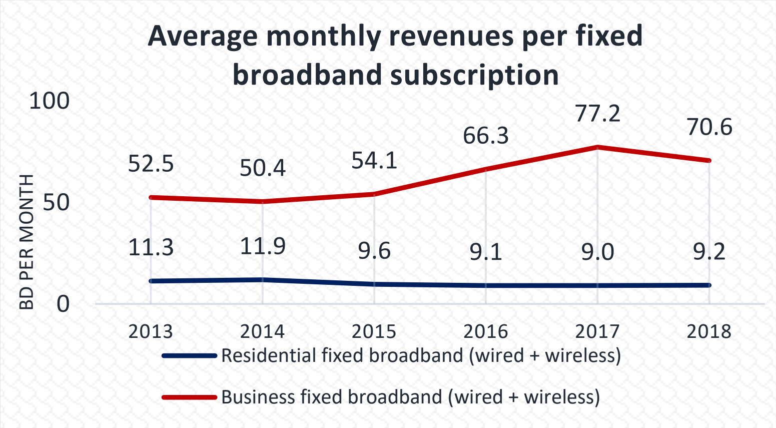
BROADBAND REVENUE

- Broadband revenues dropped to reach 50 million BD at the end of 2018 indicating the increase in competitive pressure in broadband market.
- Revenue generated from mobile broadband represents about 51% of total broadband revenue in 2018 compared to 55% in 2017.
- Revenue generated from business fixed broadband represents about 21% of total fixed broadband revenue in 2018 compared to 32% in 2013.
- The reduction in residential broadband prices resulted in a slight increase in the average revenue per subscription by 2% over the last year reaching BD9.2, while the average revenue per subscription of business broadband has decreased by (38)% over the same period to reach BD 48.



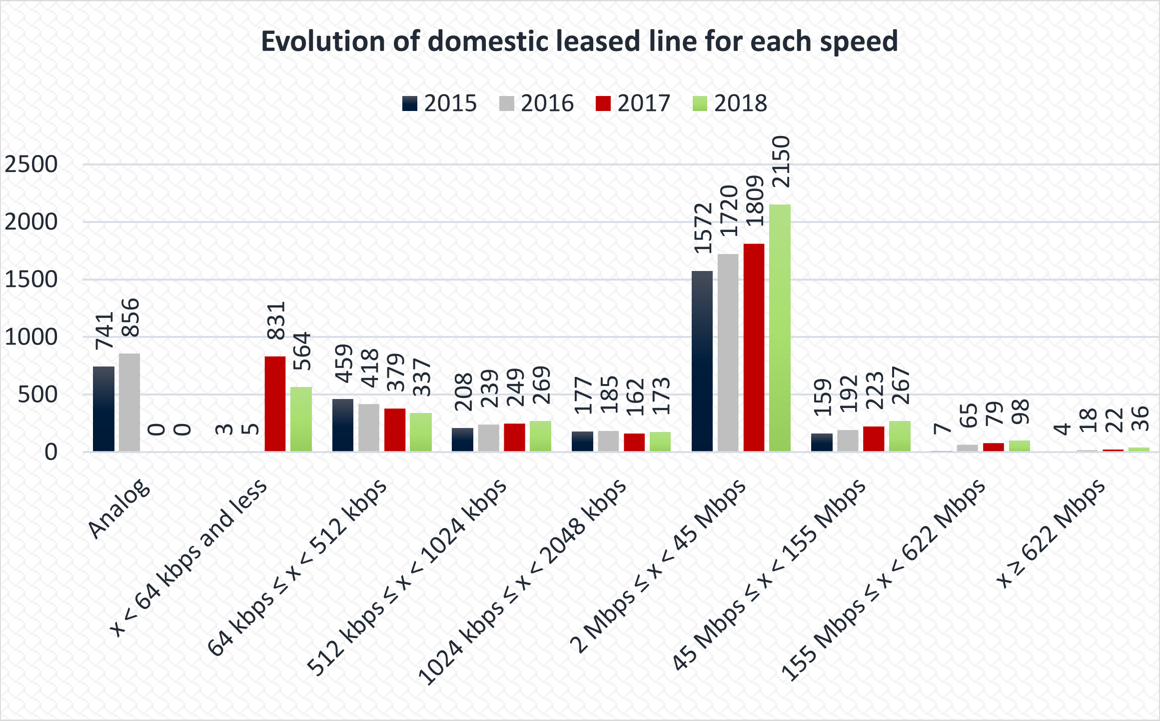


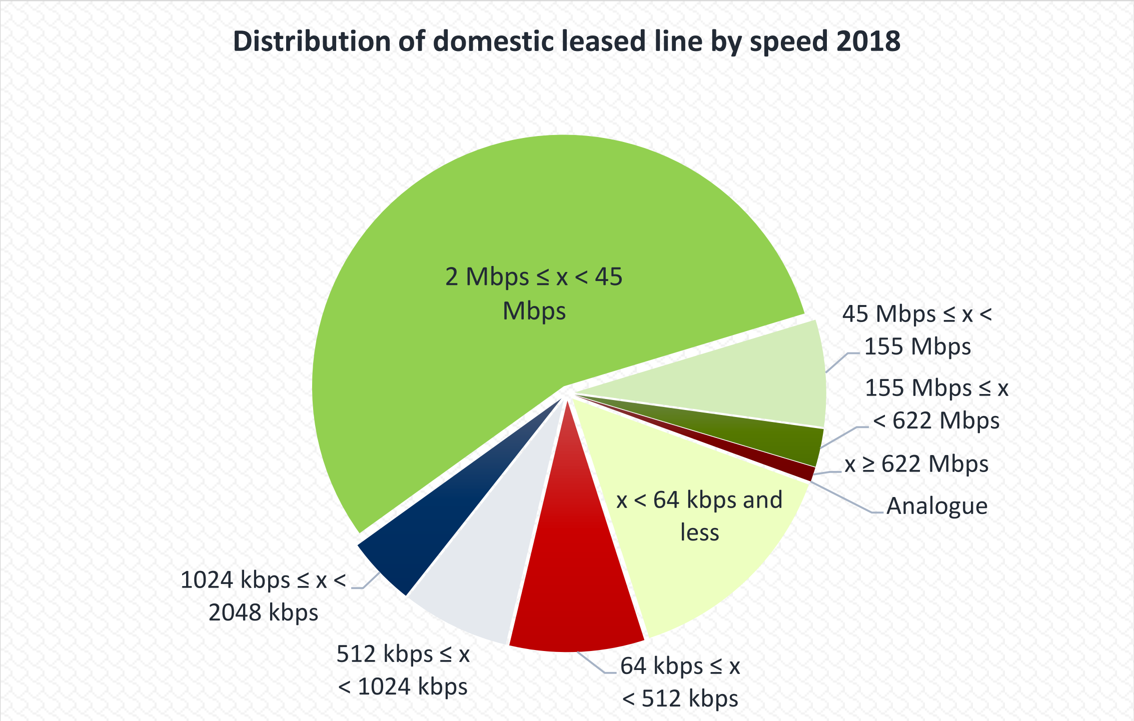




LEASED LINE

DOMESTIC LEASED LINE



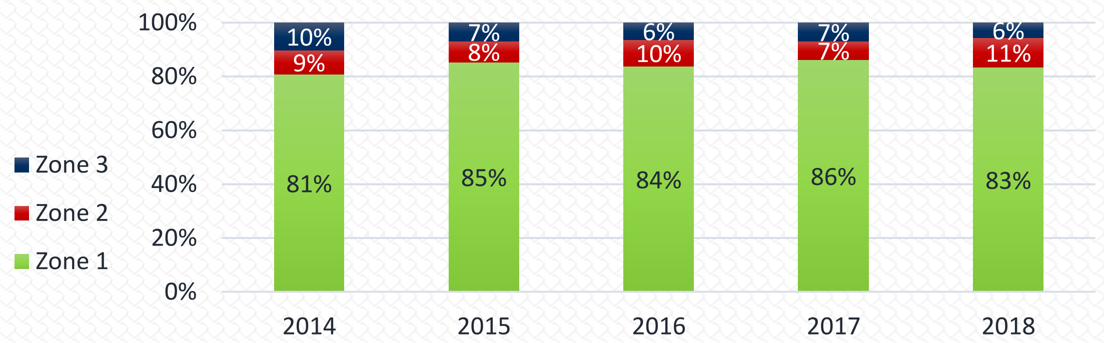


- The total number of domestic leased increased by 4% from 3,754 in 2017 to 3,894 line in 2018.

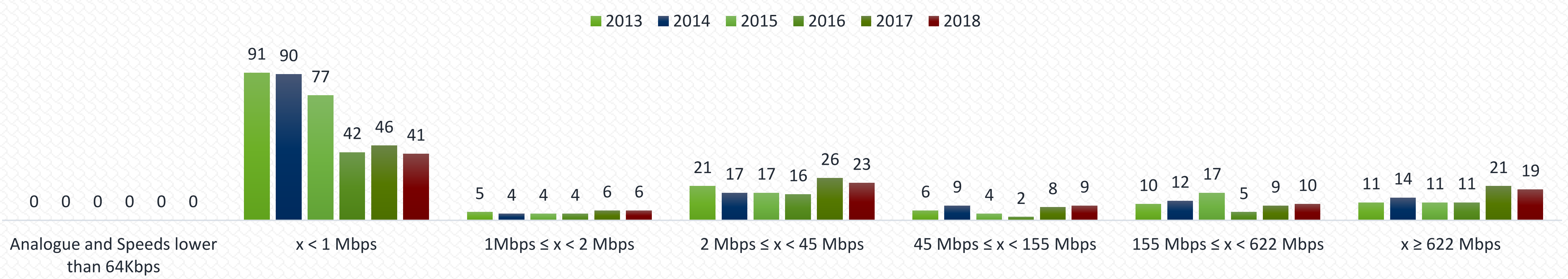
- While there has been a further drop in slower speed services, that drop was corresponded by an increase in higher speed services. During 2018 all analogue domestic leased lines were shifted to a leased line with speed lower than 64 kbps.

INTERNATIONAL LEASED LINES

- Total Number of International leased lines dropped from 116 lines at the end of 2017 to 108 Lines in 2018.
- 55.3% of international leased lines are for speed less than 2Mbps.
- 83% of international leased lines are in the GCC area.



Zone 1 (GCC)
Zone 2 (rest of Middle East, Turkey, Cyprus, Greece, India, Pakistan, South Africa)
Zone 3 (Continental USA, Canada, Europe, SE Asia)



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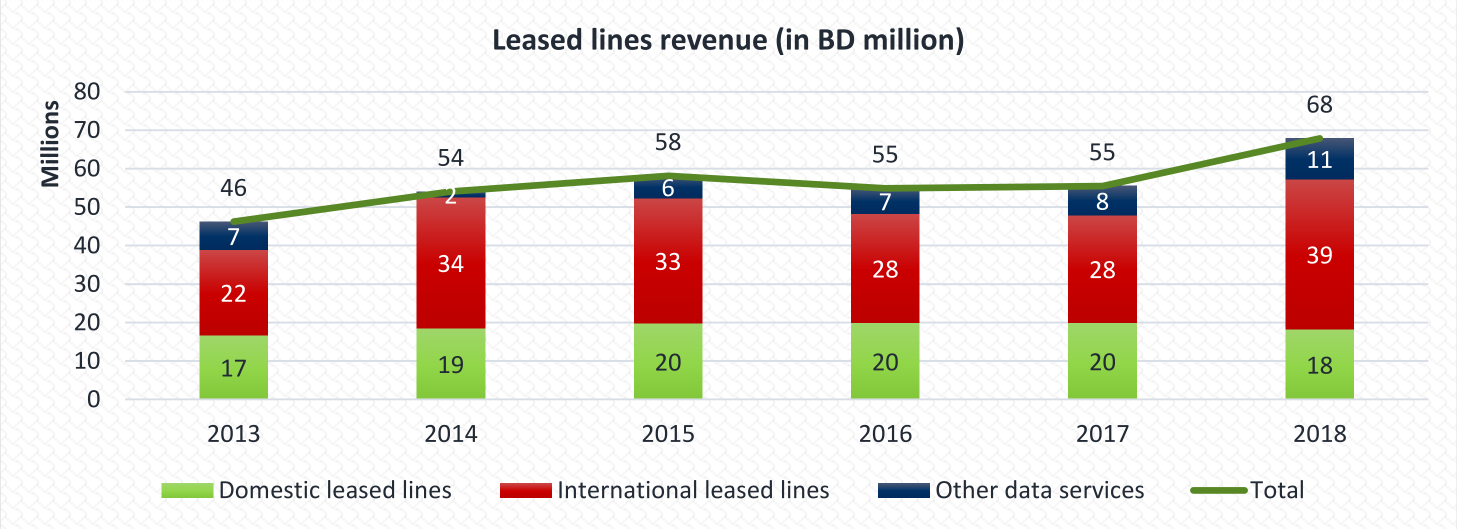
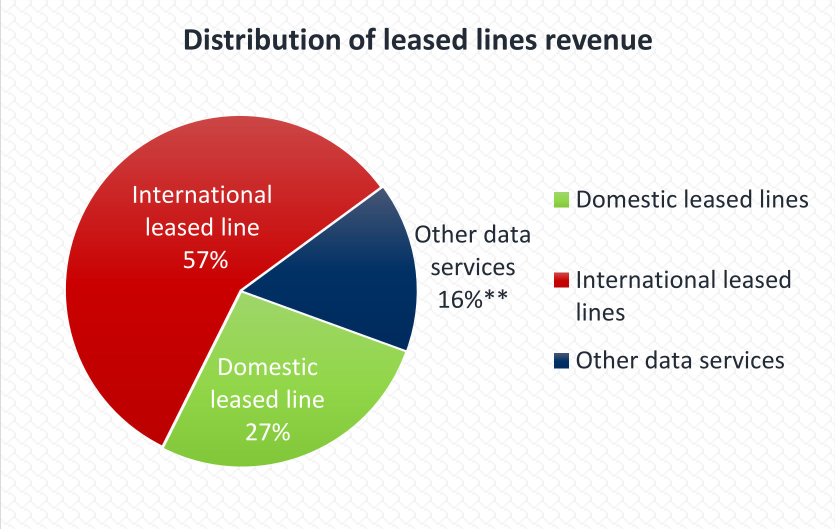
LEASED LINE REVENUES





- The revenue generated from leased lines services increased by 22.3% in 2018. While domestic lease lines revenue decreased by 8.8% in 2018, international leased lines revenue increased by 39.9% and other data services revenue increased by 39.8% in the same year.

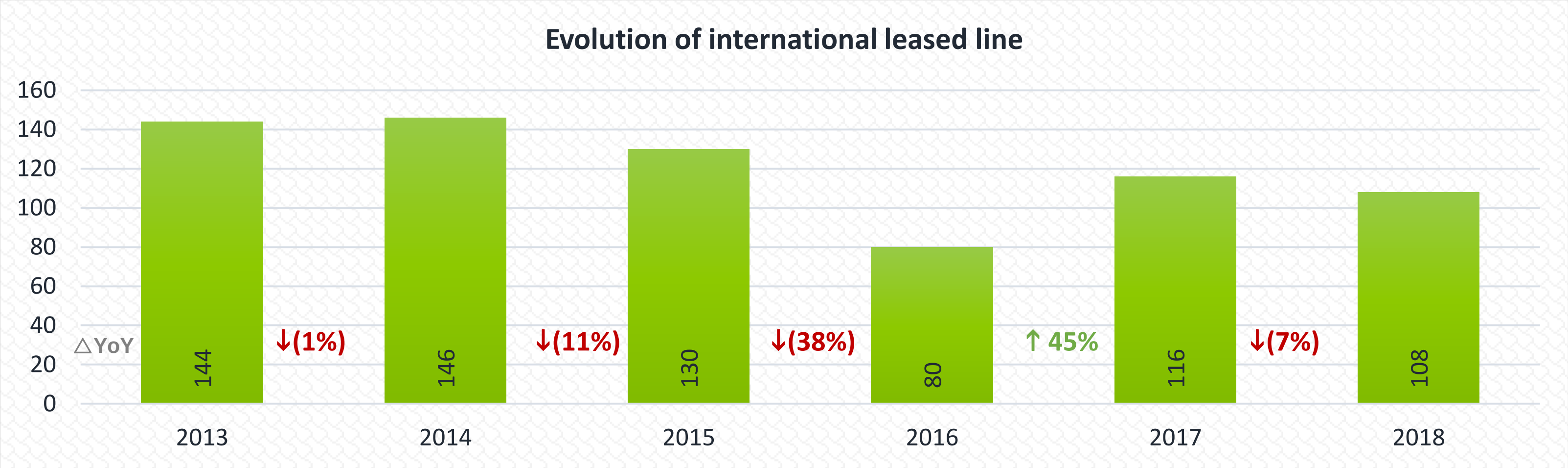
** Other Data services includes national and international frame relay, MPLS/IPVPN, managed leased line and ATM services

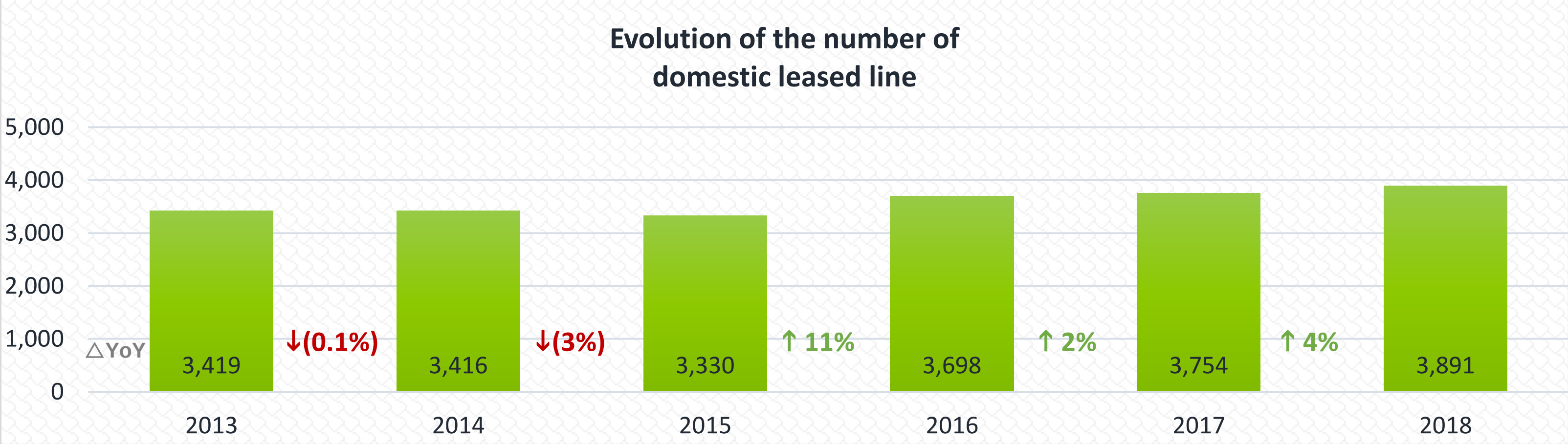
LEASED LINES REVENUE

- The total number of domestic leased increased by 4% at the end of 2018 compared to 2017, while the number of international leased lines decreased by 7% over the same period.

- Leased lines revenue increased by 22% to BHD 67 Million in 2018 compared to BHD 55 Million in 2017.

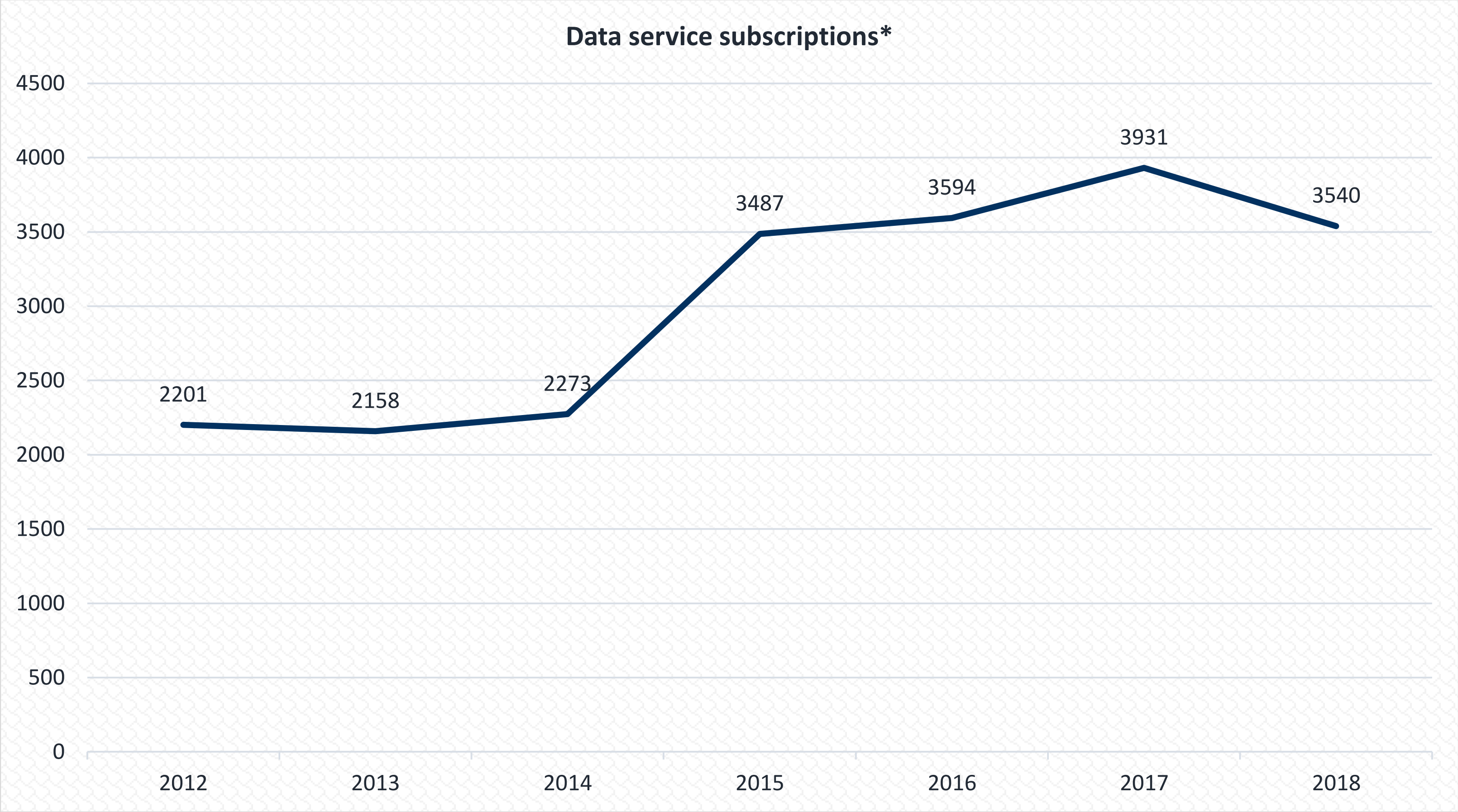
End of 2018		
	3,894	Domestic leased lines
	108	International leased lines
	BD 67,878,070	Leased lines revenues





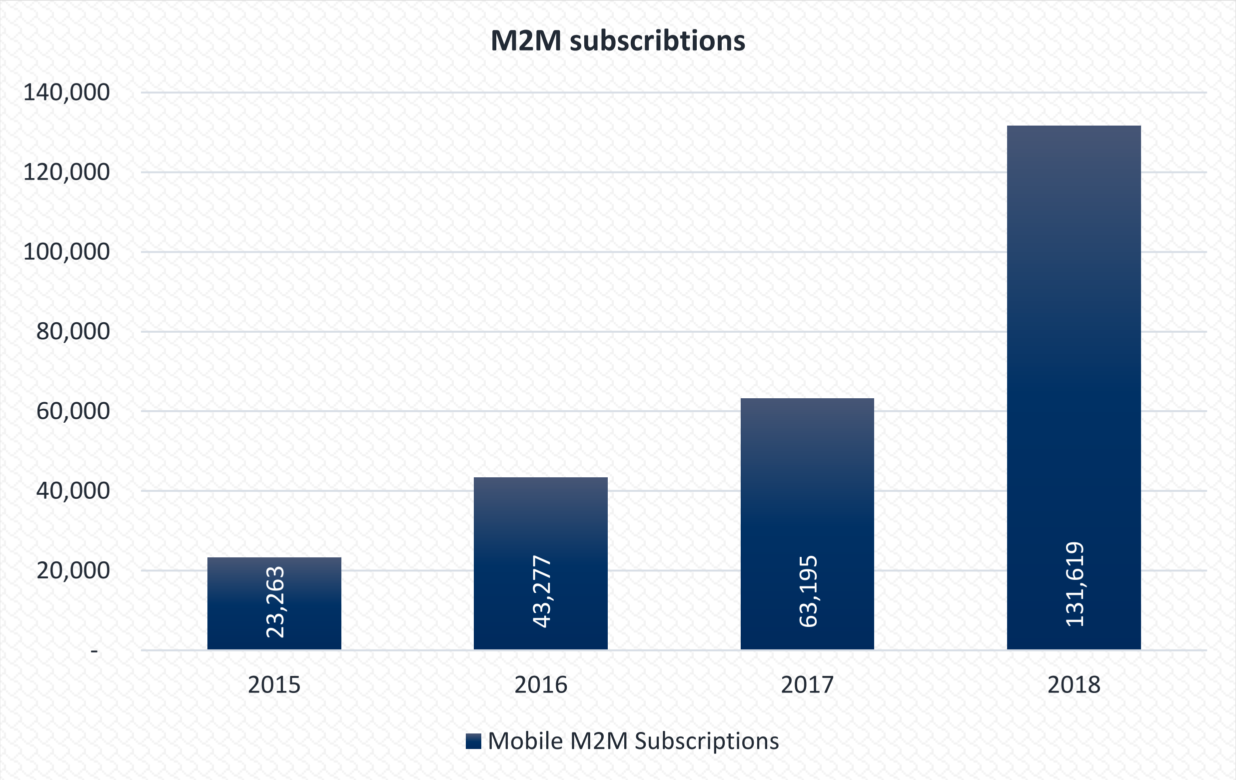
DATA SERVICES

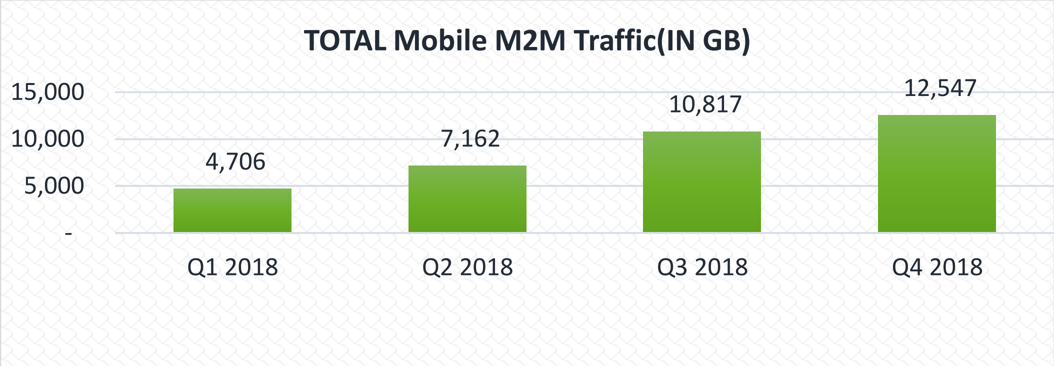
- Data services decreased by 10% in 2018 compared to 2017.
- Most of the data services are National MPLS services, which account for almost 88% of data services in 2018.
- Other major data services reported include: Inet dedicated, International MPLS while local analogue circuits are ceased.

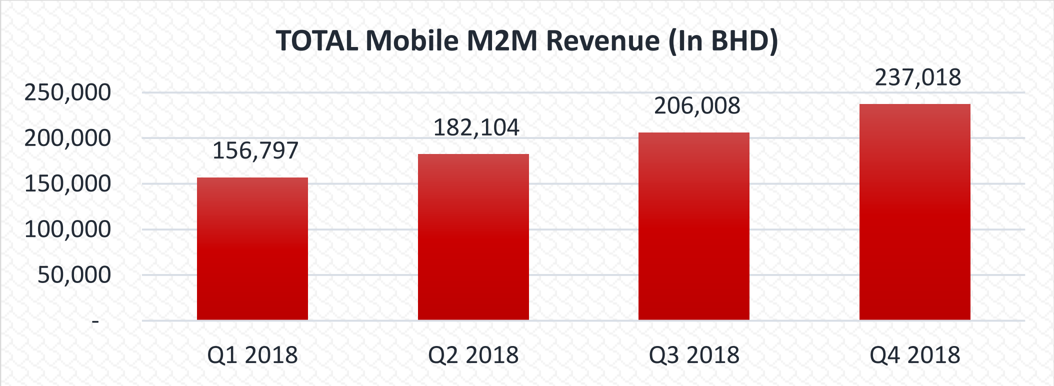


*Include MPLS/IPVPN service, Inet dedicated and International managed leased line service

MOBILE M2M SUBSCRIPTIONS



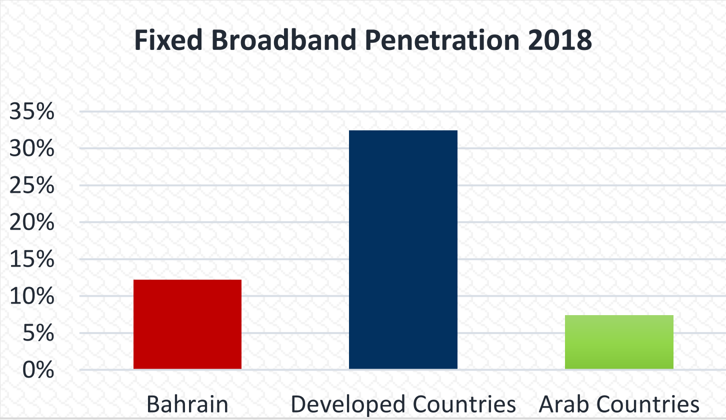


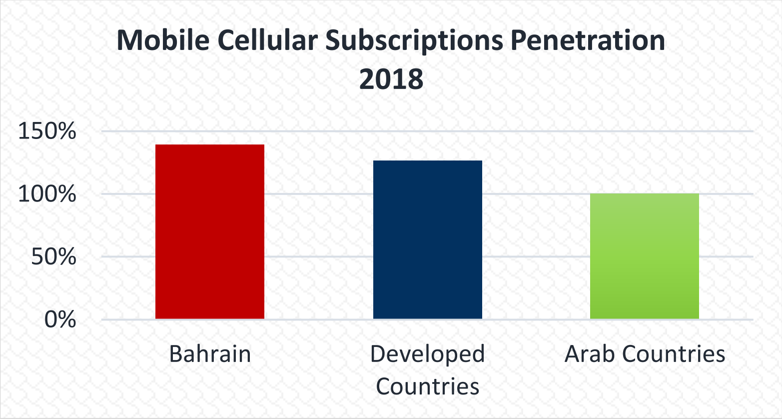


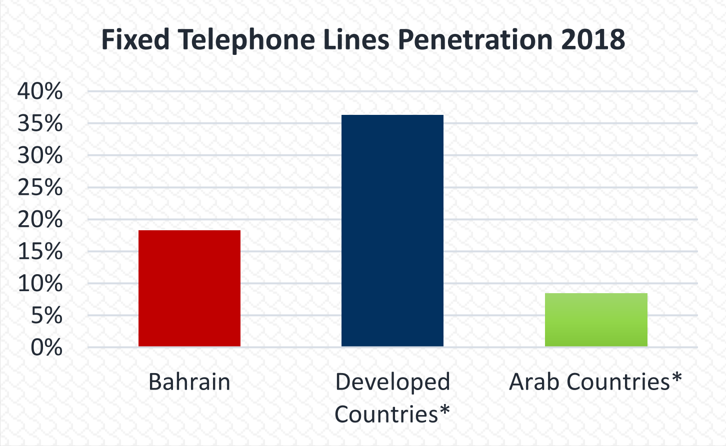
- Subscription to M2M have grown by 20,000 subscriptions year on year. However, from 2017 to 2018, subscriptions grew by 68,424.
- These subscriptions include banking services, vehicle tracking, Point of Sales, Smart meters among other services.

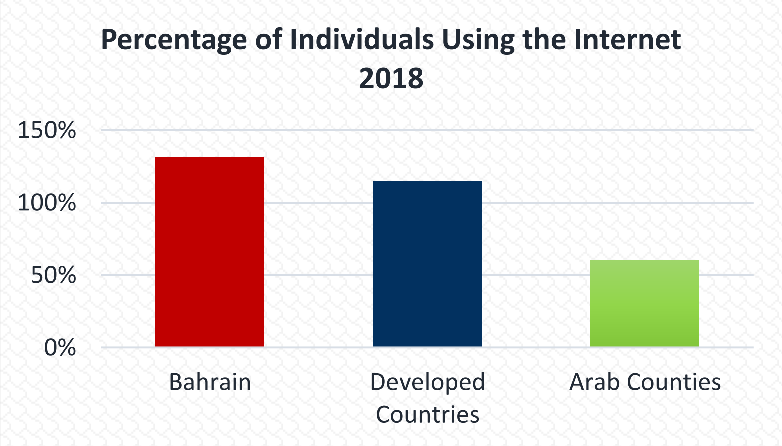
Benchmarking of telecom service penetration rates with Arab countries

- Bahrain compares very well with other Arab Countries and with Developed countries in terms of telecom services penetration. Specifically in Mobile penetration and Percentage of Individuals using the internet.









* Estimate by ITU

LIST OF ACRONYMS

ADSL	Asymmetric Digital Subscriber Line
BHD	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	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: 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. 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). 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.

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THANK YOU

Annex A

Retail services	**2015**	**2016**	**2017**	**2018**
Fixed line services	12,112,641	11,033,429	12,409,383	12,181,521
Mobile services (Excluding International Mobile IDD)	119,474,136	113,391,639	119,333,299	132,782,473
International calls - Mobile IDD	*57,206,806*	*41,995,989*	*29,161,667*	*19,661,754*
International calls - Fixed IDD	*2,959,444*	*2,403,455*	*2,034,475*	*1,783,416*
International calls – Other	*3,258,635*	*2,606,238*	*1,550,252*	*1,179,025*
International calls services	**63,424,884**	**47,005,682**	**32,746,394**	**22,624,195**
Internet services	59,316,350	59,128,005	61,422,731	50,492,400
Leased line services	58,135,613	54,565,145	55,240,920	67,878,070
Total	**312,463,624**	**285,123,899**	**281,152,727**	**285,958,659**

Wholesale services	**2015**	**2016**	**2017**	**2018**
Termination	5,162,394	4,417,085	3,528,293	2,887,124
Origination	594,544	346,336	247,329	200,258
WSIDD	723,624	831,474	986,427	275,819
Incoming calls				
Wholesale domestic leased lines	4,069,210	3,480,410	2,485,372	2,464,531
Wholesale international leased lines	1,855,112	2,164,680	3,316,430	2,998,679
Bitstream and WSDSL	477,000	408,335	334,970	364,566
Termination on your network of SMS	160,067	185,862	231,835	233,729
Termination on your network of MMS	42,978	148,413	13,992	11,136
Transit for calls				
International incoming calls	5,108,961	6,739,295	5,574,718	4,783,607
Directory Assistance (DQ) (Only Batelco)	221,130	217,129	214,235	155,214
Duct	1,680,000	1,777,305	1,815,819	1,814,244
Total	**20,095,021**	**20,716,325**	**18,749,419**	**16,188,907**

	2015	**2016**	**2017**	**2018**
Retail Services Revenue	312,463,624	285,123,899	281,152,727	285,958,659
Wholesale Services Revenue	20,095,021	20,716,325	18,749,419	16,188,907
Other Revenue	116,675,816	129,763,661	124,270,466	128,405,527
TOTAL	**449,234,460**	**435,603,885**	**424,172,612**	**430,553,092**