

# Telecommunications Retail Price Benchmarking for Arab Countries 2018



Report from the AREGNET Price Benchmarking Study

December 2018

**STRATEGY ANALYTICS**  
TELIGEN TARIFF & BENCHMARKING



# ACKNOWLEDGEMENTS

Teligen wishes to thank:

- The AREGNET members for feedback and support in the collection of tariff information and to TRA Bahrain for commissioning and coordinating the study on behalf of AREGNET
- The operators who have contributed with additional tariff information



# CONTENTS OF THIS REPORT

• Background to the study and basket concept	4
• Comparative Price Level (CPL) and Purchasing Power Parity (PPP)	5
• Price benchmarking with “Baskets”	6
• Results from the PSTN basket for 2018, time series and ranking	7
• Results from the mobile basket for 2018, time series and ranking	26
• Results from the leased line basket for 2018, time series and ranking	55
• Results from the fixed broadband basket for 2018, time series and ranking	71
• Results from the mobile broadband basket for 2018, time series and ranking	147
• Summary of main findings from the benchmarking study	140
• Appendix	
• Exchange rates and VAT	154
• PPP	155
• List of acronyms used	157



# BACKGROUND TO THE STUDY AND BASKET CONTEXT

- The benchmarking study was originally initiated by TRA Bahrain in 2008 and updated in 2009, 2010, 2011, 2012, 2013, 2015, 2016 and 2017. This update for 2018 was commissioned by TRA Bahrain.
- In increasingly competitive markets it is important for regulators to be able to track the evolution of prices and analyze the impact of price changes and competition on the effective prices paid by consumers.
- This study allows Arab countries to compare the price levels within and between countries, and also to compare with the OECD countries. To enable such comparisons, this study shows the cost of purchasing ‘baskets’ of telecommunications services. Additionally, time series data is presented, showing how the cost of such baskets has changed in each country over the period from 2013 to 2018.
- The benchmarking covers the following services:
  - Fixed voice (PSTN) (OECD basket equivalent)
  - Mobile telephony (OECD basket equivalent)
  - Leased Lines (OECD basket equivalent)
  - Broadband ADSL (OECD basket equivalent)
  - Mobile broadband (OECD basket equivalent)
  - Call cost for specific types of calls
- The basket methodologies used are identical to the OECD Price Benchmarking baskets from 2010, with minor changes. A separate document explaining the methodology used in this study is available.
  - The OECD adopted a new set of Mobile Broadband baskets in 2012, and a subset of these are used for the analysis of the mobile broadband services.
  - The mobile voice baskets were also extended to incorporate handset data, and results for these new baskets are covered in this report.
  - The OECD adopted a new set of Fixed Broadband baskets in 2014, and a subset of these are used for the analysis of the fixed broadband services.
- The data was collected in January 2018 by Teligen from public sources on the Internet, and was subsequently passed to national regulators for comments and checking.

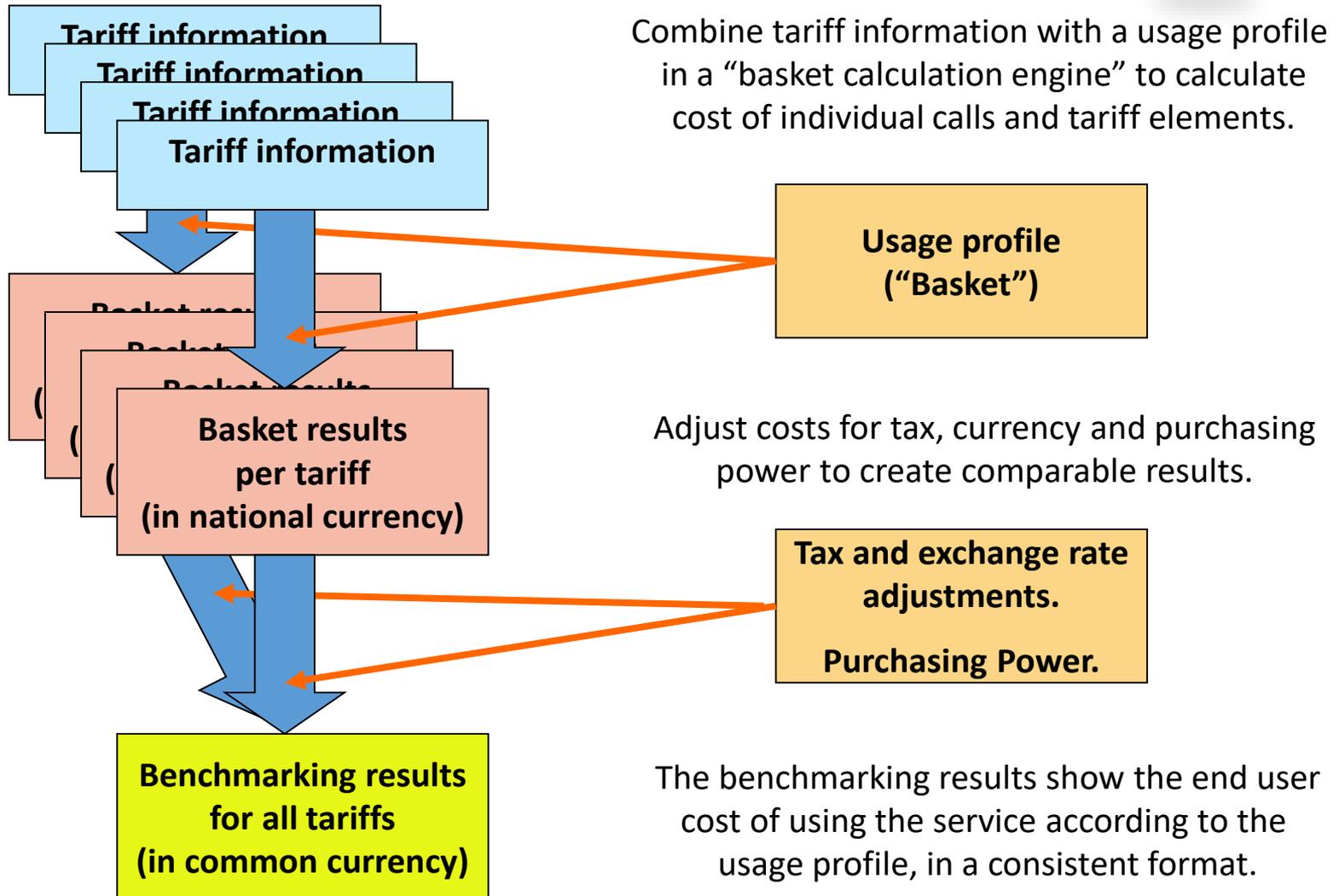
# COMPARATIVE PRICE LEVEL (CPL) AND PURCHASING POWER PARITY (PPP)



- The data presented in the report is presented using purchasing power parities (PPPs), which are used to incorporate both the financial differences between exchange rates, and the differences in the state of the economies as seen through the purchasing power of the citizens in each country.
- In order to create an up to date PPP conversion factor, published Comparative Price Level (CPL) data is used
  - This is described in more depth on pages 155 and 156, in the appendix of this report.
- The CPL data used for this study has been obtained from the World Bank, and is based on 2016 data.
- The World Bank CPL data also contained some gaps i.e. data for some countries was not available, so assumptions were made as to the likely CPL values for these countries
- The PPP values have been applied retrospectively to any historic data presented in this report
  - This is to ensure that any changes observed in the time series are as a result of changes to tariffs and not to exchange rates and CPL values.
- The output from this report will not necessarily be comparable with previous reports up to 2015 due to the changes in World Bank CPL data that occurred between production of the 2015 and 2016 benchmarking reports. This is described in more detail in the 2016 benchmarking report.



# PRICE BENCHMARKING WITH “BASKETS”





# PSTN BASKET RESULTS 2018



## FIXED VOICE (PSTN) DATA ISSUES

- Due to lack of published data, and lack of feedback, only partial (or no) data is available (and no results are included) for:
  - Comoros (no prices for international calls)
  - Iraq
  - Libya
  - Somalia
  - Syria
  - Yemen (no prices for national calls and fixed line)
- Business tariffs are not published (and no business results are included) for:
  - Algeria
  - Egypt
  - Kuwait
  - Qatar
  - Sudan
- As fixed voice services are not optimised for high use in Mauritania, the results for residential usage above 20 calls, and business usage have been excluded from the Arab Average, due to the distorting effect on the average.
- The analysis covers up to 120 tariffs from the incumbent operators in 16 countries





# FIXED VOICE (PSTN) BASKETS, OECD 2010 DEFINITIONS

- Six different basket definitions:
  - Defined by number of calls per month
  - Residential: 20, 60, 140 and 420 calls per month
  - Business: 100 and 260 calls per month

Calls per month	Total calls	Call distribution			
		Fixed to fixed Local	Fixed to fixed National	Fixed to mobile	International
20 calls residential basket	20	61%	20%	17%	2%
60 calls residential basket	60	60%	15%	21%	4%
140 calls residential basket	140	58%	15%	23%	4%
420 calls residential basket	420	73%	17%	8%	2%
100 calls business basket	100	48%	19%	30%	3%
260 calls business basket	260	43%	23%	25%	9%

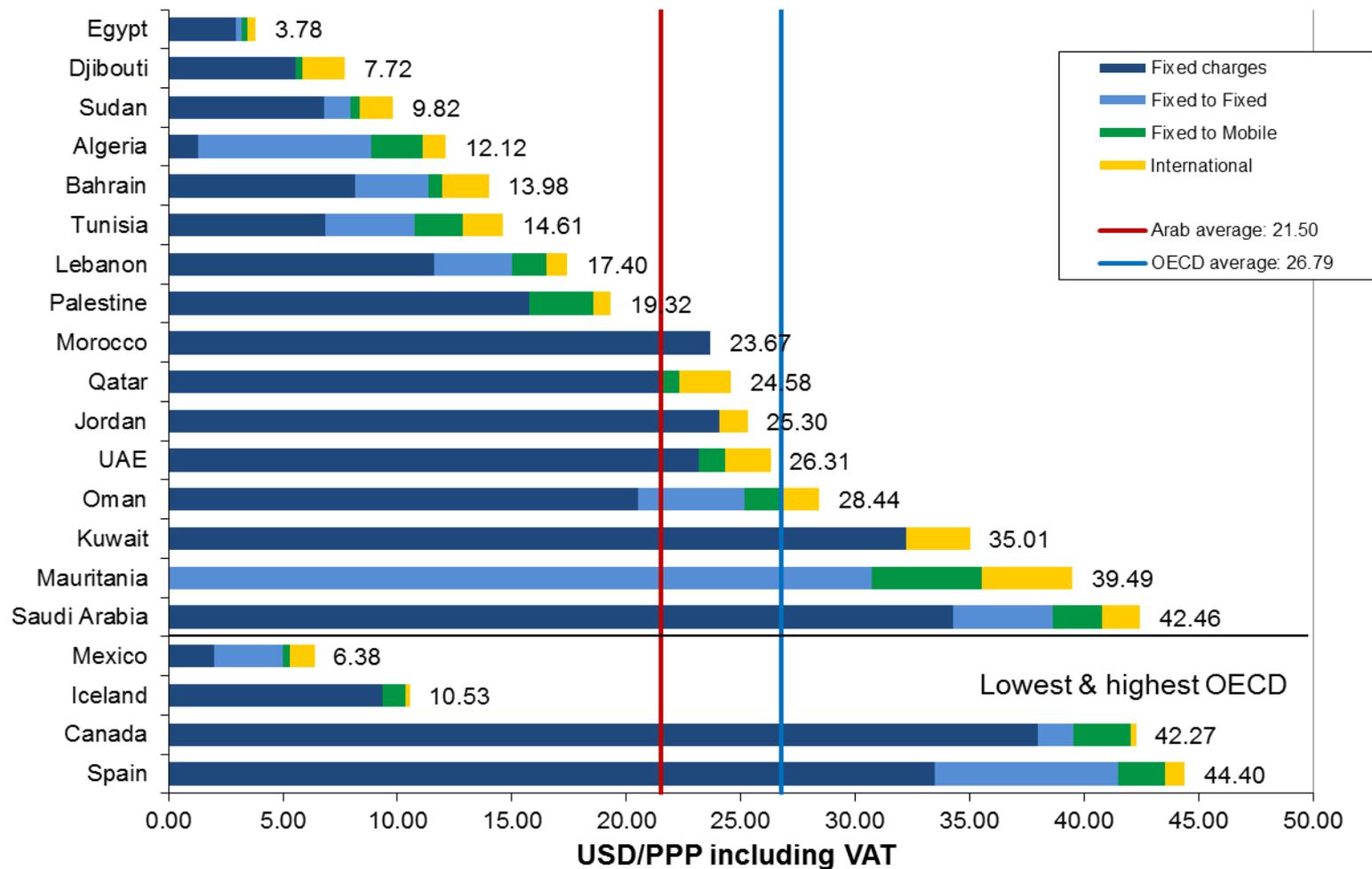
- Tariffs from the incumbent operator in each country
  - Several tariff packages can be covered for each operator
  - The results show the lowest cost option for each operator
- Tariff information included in basket calculation:
  - Fixed charges for installation and rental
  - Usage charges covering local through to national calls, calls to mobiles, and international calls to other AREGNET countries plus a few other destinations



# 20 CALLS/MONTH, RESIDENTIAL BASED ON 2010 OECD PSTN BASKET



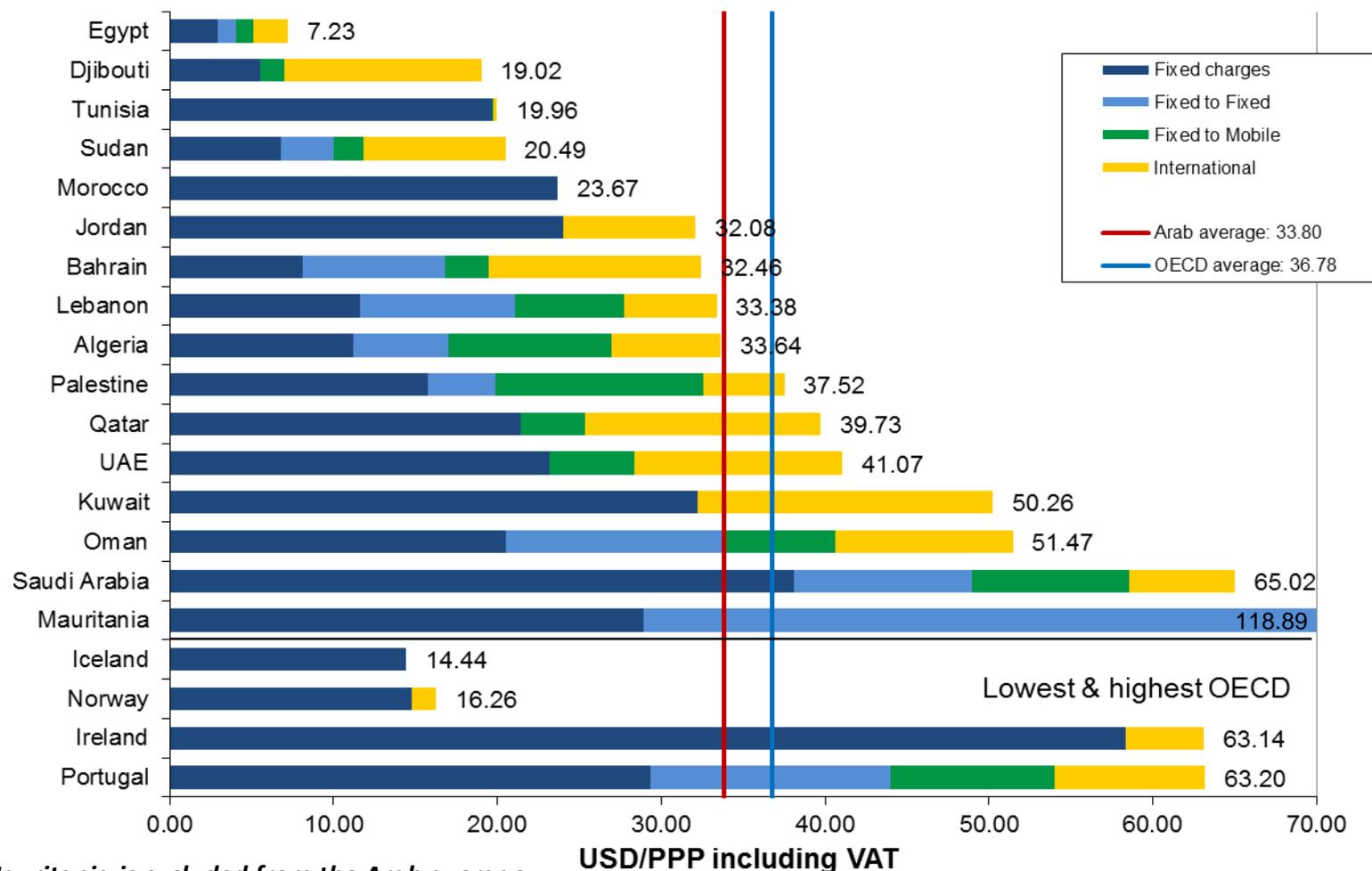
## 20 calls residential 2010 basket Tariffs as of January 2018



# 60 CALLS/MONTH, RESIDENTIAL BASED ON 2010 OECD PSTN BASKET



## 60 calls residential 2010 basket Tariffs as of January 2018



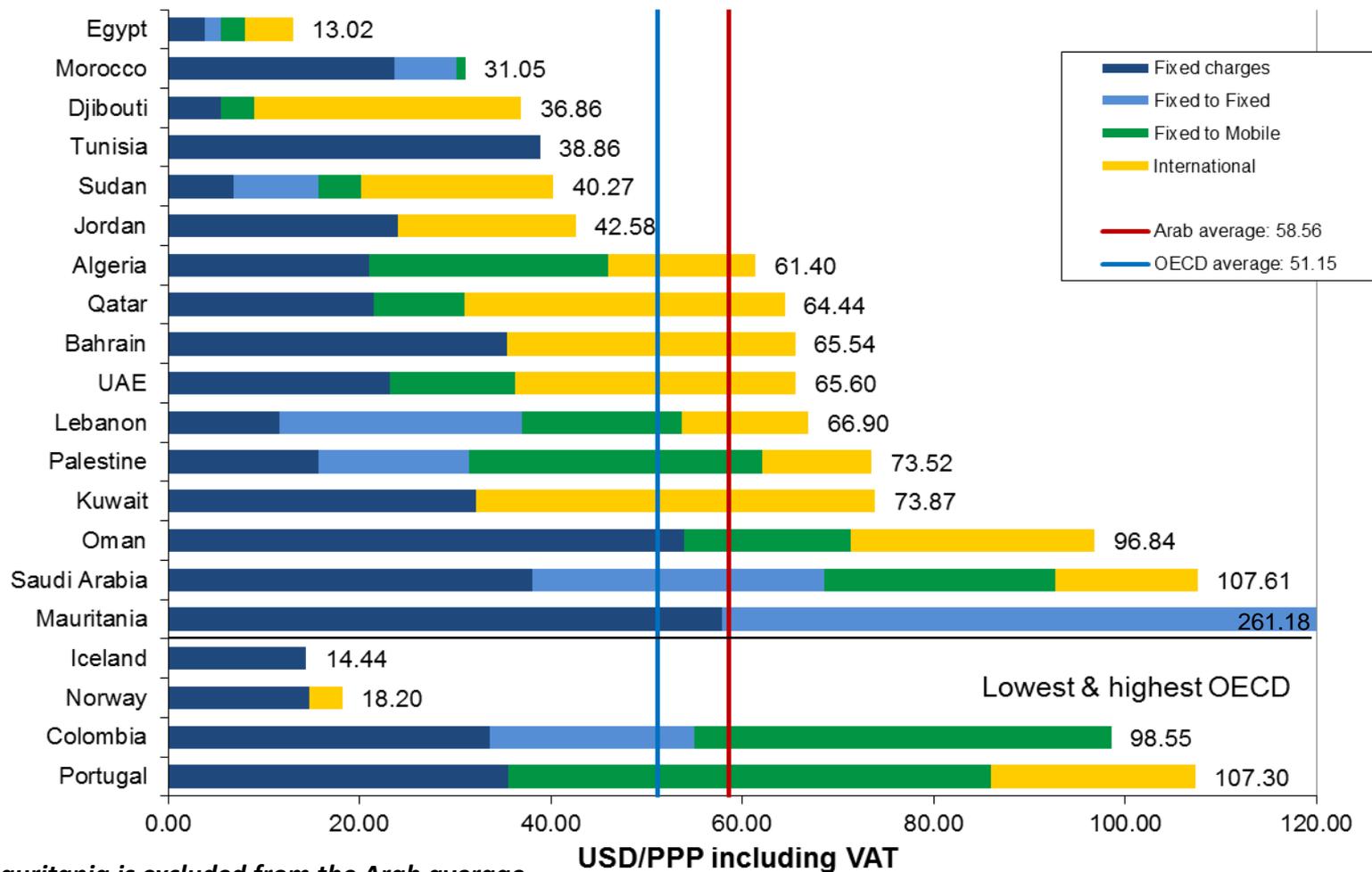
Mauritania is excluded from the Arab average



# 140 CALLS/MONTH, RESIDENTIAL BASED ON 2010 OECD PSTN BASKET



## 140 calls residential 2010 basket Tariffs as of January 2018



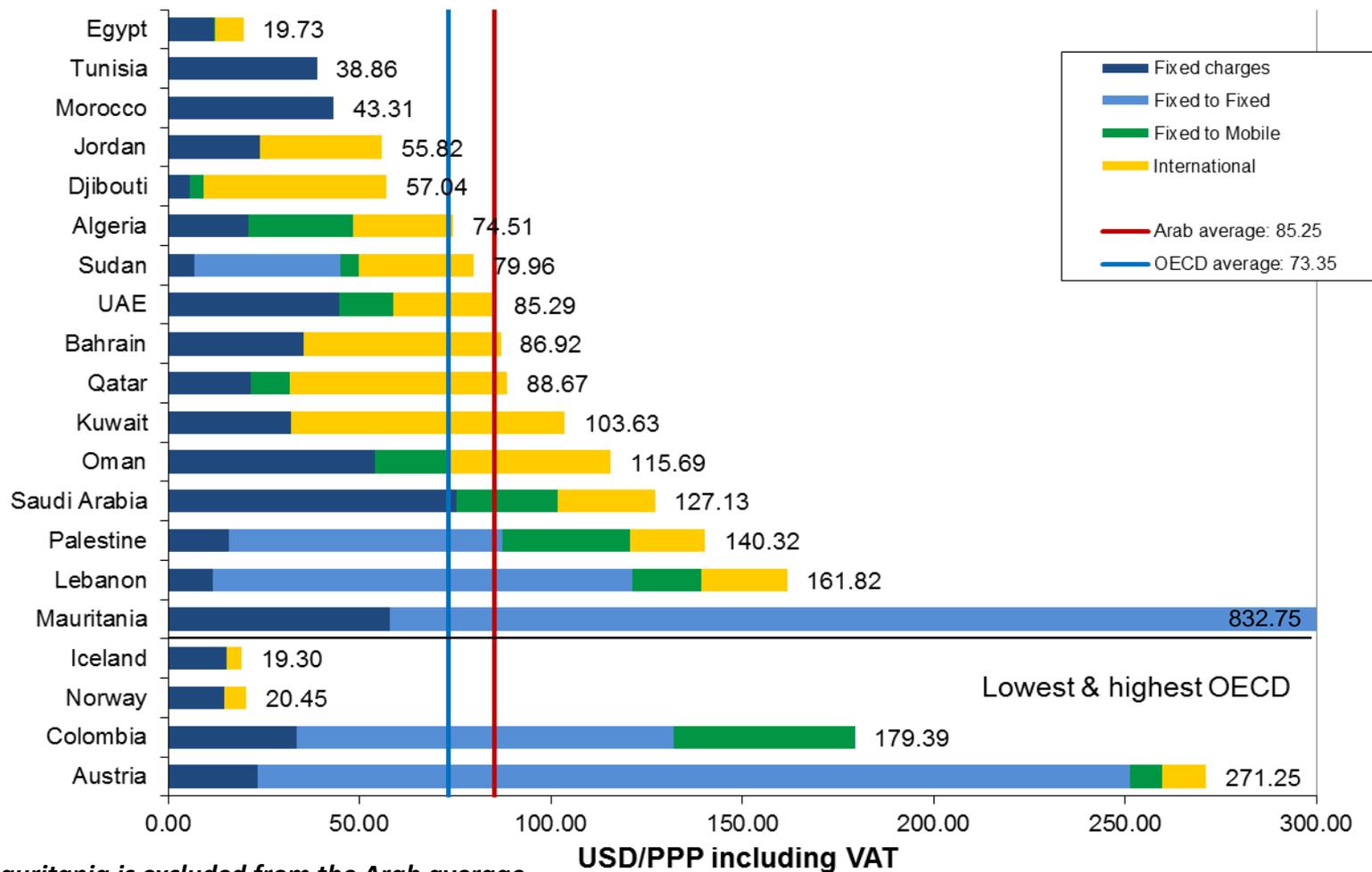
Mauritania is excluded from the Arab average



# 420 CALLS/MONTH, RESIDENTIAL BASED ON 2010 OECD PSTN BASKET



## 420 calls residential 2010 basket Tariffs as of January 2018



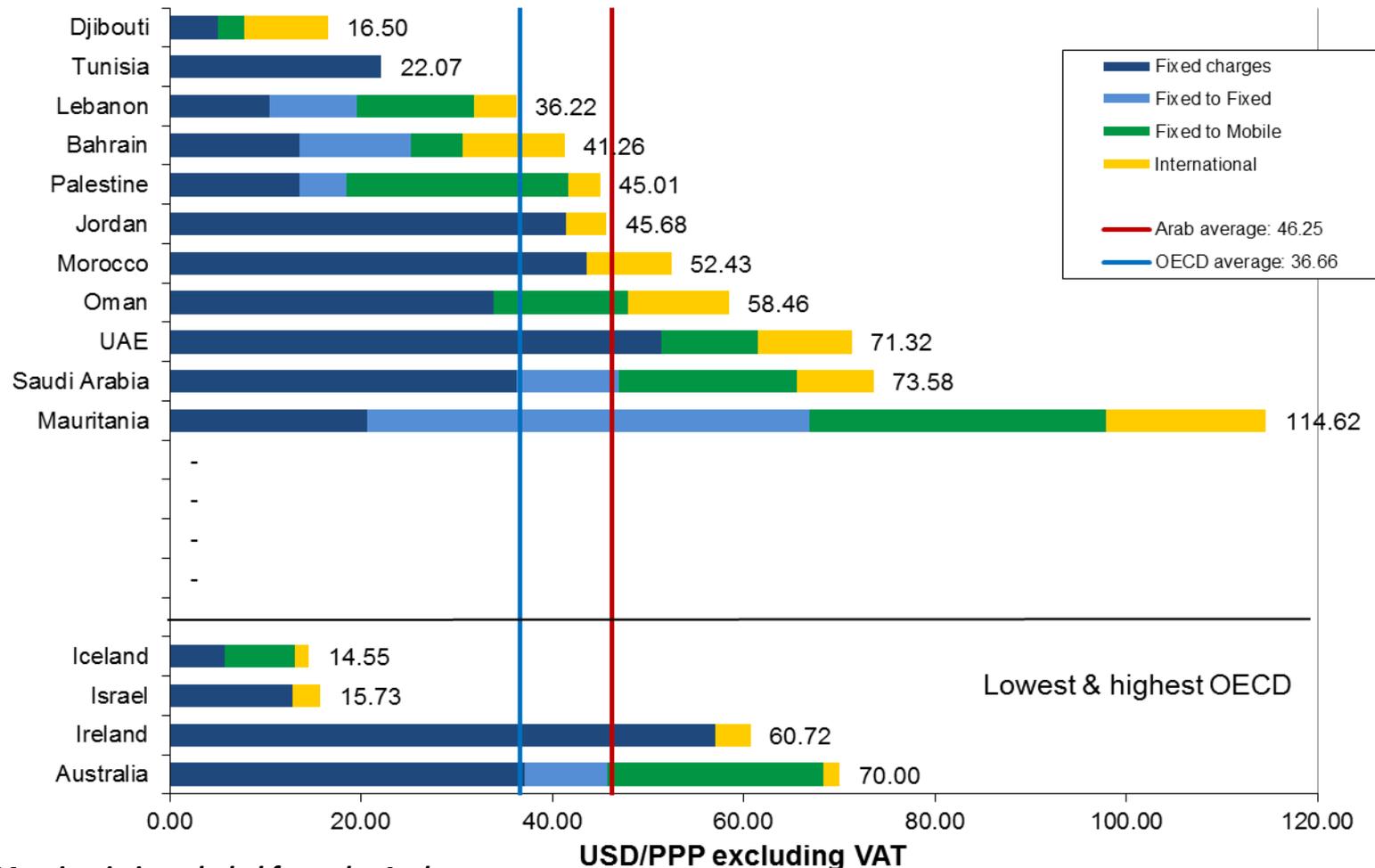
Mauritania is excluded from the Arab average



# 100 CALLS/MONTH, BUSINESS BASED ON 2010 OECD PSTN BASKET



**100 calls business 2010 OECD basket**  
Tariffs as of January 2018



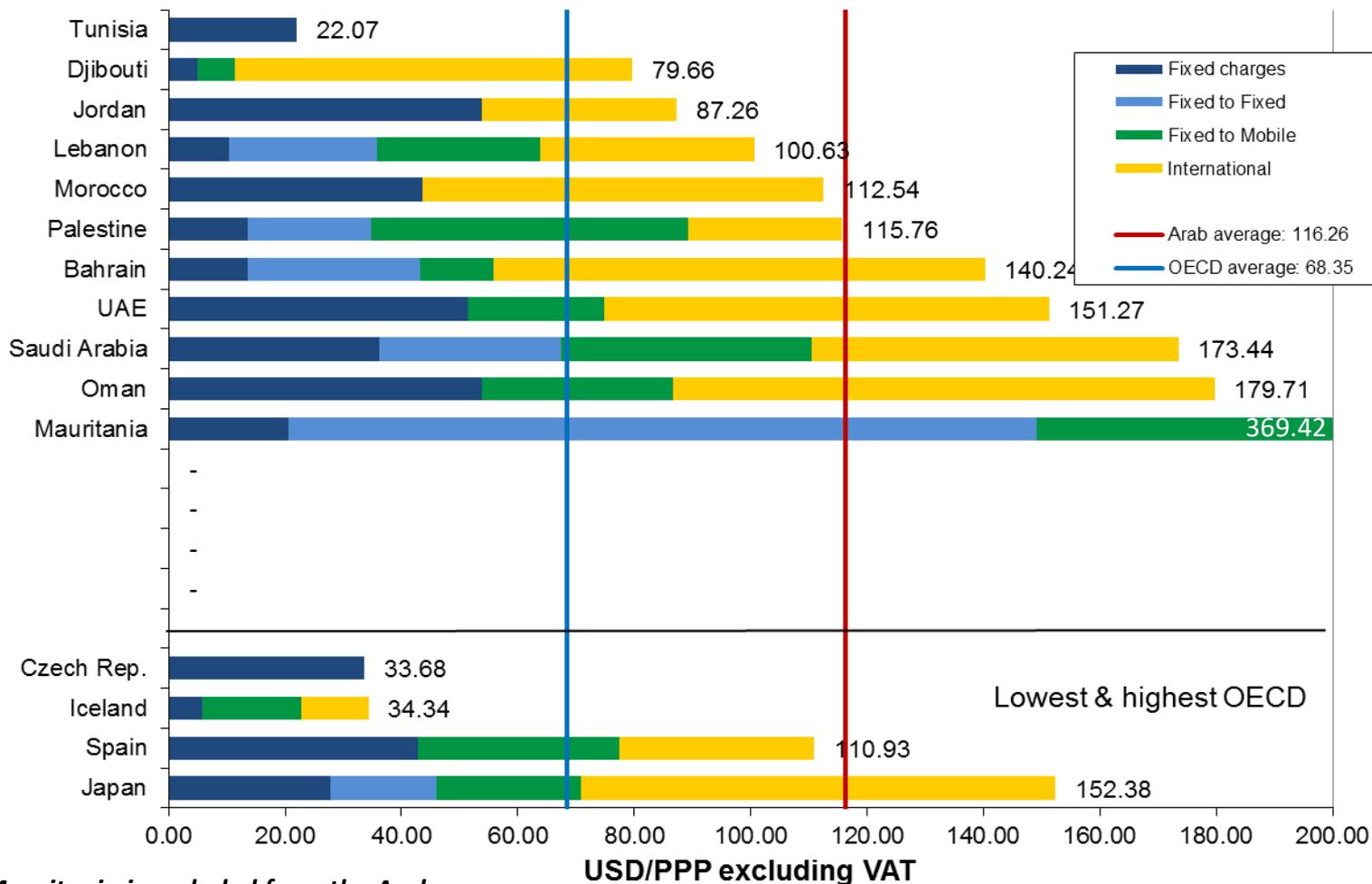
*Mauritania is excluded from the Arab average*



# 260 CALLS/MONTH, BUSINESS BASED ON 2010 OECD PSTN BASKET



## 260 calls business 2010 OECD basket Tariffs as of January 2018



Mauritania is excluded from the Arab average





# OBSERVATIONS FROM PSTN BASKET RESULTS

- The cheapest and most expensive countries throughout are : (\*)

	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd
20 calls residential	Egypt	Djibouti	Sudan	Saudi Arabia	Mauritania	Kuwait
60 calls residential	Egypt	Djibouti	Tunisia	Mauritania	Saudi Arabia	Oman
140 calls residential	Egypt	Morocco	Djibouti	Mauritania	Saudi Arabia	Oman
420 calls residential	Egypt	Tunisia	Morocco	Mauritania	Lebanon	Palestine
100 calls business	Djibouti	Tunisia	Lebanon	Mauritania	Saudi Arabia	UAE
260 calls business	Tunisia	Djibouti	Jordan	Mauritania	Oman	Saudi Arabia

- Comparison between OECD and Arab averages are shown on the following slide, however, the following can be observed:
  - For low to medium residential usage (20 and 60 calls), most countries are either below the OECD average, or are on par with it. Consequently, at this level of usage, the Arab average is below that of the OECD.
  - For higher residential usage – 140 calls and 420 calls, the balance shifts, however, the Arab average is still broadly on par with the OECD average. As in previous years, the results for Mauritania have been excluded from the Arab average (for the 60 calls basket upwards), as these negatively distort the average. With Mauritania excluded, the higher use baskets, while still higher than the OECD average, are not significantly so, but rather are much more closely aligned with it.
  - Costs for the business baskets in the Arab countries vary, depending on usage, but once again, due to the especially high costs in Mauritania, this has been excluded from the Arab average. For the lower use basket – 100 calls/month, over half of the Arab countries are either lower or on par with the OECD average, with the Arab average around 26% higher than the OECD average. For higher usage – the 260 calls basket - the Arab average is 70% higher than that of the OECD average.
- As in 2017, a number of the Arab countries in North Africa are cheaper than those in the Middle East.
- Mauritania is generally the most expensive country for residential PSTN, and, for higher usage, by some considerable way. Saudi Arabia, Oman, Palestine and Lebanon are among the most expensive countries. Mauritania, Oman and Saudi Arabia are also the most expensive of the Arab countries for the business baskets.
- If Mauritania is excluded from the residential analysis, then the price range for the Arab countries (cheapest to most expensive) is similar to that of the cheapest and most expensive OECD countries, and the overall Arab average is comparable to the OECD average.
- A number of Arab countries continue to have fixed costs well below the OECD countries, causing the usage element to dominate. This makes the overall cost grow quicker with increasing usage, something that will discourage growth in usage. In some Arab countries, however, both fixed and usage costs are much higher than OECD countries.
- International calls remain significantly more expensive than in OECD countries
- Saudi Arabia and UAE have now applied 5% VAT to residential telecoms services



\* Countries with gaps in the tariff information are not considered.

# COMPARISON OF OECD AND ARAB AVERAGES



	USD PPP/month*	
	OECD average	Arab average
20 calls residential	26.79	21.50
60 calls residential	36.78	33.80
140 calls residential	51.15	58.56
420 calls residential	73.35	85.25
100 calls business	36.66	46.25
260 calls business	68.35	116.26

\* residential baskets include VAT, business baskets exclude VAT

	% that Arab average is higher or lower than OECD average
20 calls residential	-20%
60 calls residential	-8%
140 calls residential	14%
420 calls residential	16%
100 calls business	26%
260 calls business	70%

- For lower and medium usage residential baskets, the Arab average is lower than the OECD average
- As usage increases, the variation between the Arab and OECD averages grows. However, although the Arab average is higher, it is not significantly so, and is broadly on par with the OECD average.
- For both business baskets, the Arab average is more expensive than the OECD average, with lower usage Arab businesses paying on average 26% more, and higher usage businesses paying around 70% more.
- Due to the extremely high cost of PSTN services in Mauritania, and its distorting effect on the Arab average, the results for Mauritania have been excluded from the Arab average for all but the Residential 20 calls basket.





# PSTN TIME SERIES ANALYSIS AND RANKING TABLES 2013-2018

# 2010 OECD PSTN BASKETS RANKING, 20 CALLS/MONTH, RESIDENTIAL



Total results for PSTN OECD 20 calls residential basket based on 2010 OECD basket, tariffs 2013-2018  
Results in USD/PPP including VAT, residential results

Ranking for PSTN OECD 20 calls residential basket based on 2010 OECD basket  
Residential results

	2013	2015	2016	2017	2018
Algeria	20.84	21.04	21.22	12.12	12.12
Bahrain	13.98	13.98	13.98	13.98	13.98
Comoros					
Djibouti	17.22			7.82	7.72
Egypt	5.95	1.56	1.53	3.78	3.78
Iraq					
Jordan	24.62	24.17	24.17	25.30	25.30
Kuwait					35.01
Lebanon	22.62	17.32	17.32	17.40	17.40
Libya	8.29				
Mauritania	50.32	78.15	78.15	54.74	39.49
Morocco	50.37	44.89	47.21	23.67	23.67
Oman	28.44	28.44	28.44	28.44	28.44
Palestine	19.32	19.32	19.32	19.32	19.32
Qatar	24.58	24.58	24.58	24.58	24.58
Saudi Arabia	74.66	40.51	40.51	40.51	42.46
Somalia	45.11				
Sudan	4.66	4.66	4.66	9.76	9.82
Syria	1.17	2.26	2.48		
Tunisia	9.94	11.26	13.18	14.59	14.61
UAE	24.06	21.72	25.96	25.96	26.31
Yemen	2.10				

	2013	2015	2016	2017	2018
Algeria	10	8	8	4	4
Bahrain	7	5	5	5	5
Comoros	-	-	-	-	-
Djibouti	8	-	-	2	2
Egypt	4	1	1	1	1
Iraq	-	-	-	-	-
Jordan	14	10	9	11	11
Kuwait	-	-	-	-	14
Lebanon	11	6	6	7	7
Libya	5	-	-	-	-
Mauritania	17	15	15	15	15
Morocco	18	14	14	9	9
Oman	15	12	12	13	13
Palestine	9	7	7	8	8
Qatar	13	11	10	10	10
Saudi Arabia	19	13	13	14	16
Somalia	16	-	-	-	-
Sudan	3	3	3	3	3
Syria	1	2	2	-	-
Tunisia	6	4	4	6	6
UAE	12	9	11	12	12
Yemen	2	-	-	-	-

Arab average	2013	2015	2016	2017	2018
	23.59	23.59	24.18	21.47	21.50

Below Arab average  
Above Arab average

Least expensive  
Most expensive



# 2010 OECD PSTN BASKETS RANKING, 60 CALLS/MONTH, RESIDENTIAL



Total results for PSTN OECD 60 calls residential basket based on 2010 OECD basket, tariffs 2013-2018  
Results in USD/PPP including VAT, residential results

Ranking for PSTN OECD 60 calls residential basket based on 2010 OECD basket  
Residential results

	2013	2015	2016	2017	2018
Algeria	51.54	52.86	54.00	33.64	33.64
Bahrain	32.44	32.44	32.44	32.46	32.46
Comoros					
Djibouti	63.72			19.65	19.02
Egypt	13.89	5.91	5.61	7.37	7.23
Iraq					
Jordan	34.09	41.73	41.73	32.08	32.08
Kuwait					50.26
Lebanon	40.99	32.84	32.84	33.38	33.38
Libya	29.55				
Mauritania	92.31	195.81	195.81	118.98	118.98
Morocco	68.24	65.33	63.86	23.67	23.67
Oman	51.47	51.47	51.47	51.47	51.47
Palestine	37.52	37.52	37.52	37.52	37.52
Qatar	39.73	39.73	39.73	39.73	39.73
Saudi Arabia	87.96	62.79	62.79	62.23	65.02
Somalia	68.16				
Sudan	11.40	11.40	11.40	20.74	20.49
Syria	4.27	7.03	7.59		
Tunisia	26.18	19.97	19.94	19.96	19.96
UAE	32.87	28.13	44.92	44.92	41.07
Yemen	13.49				

	2013	2015	2016	2017	2018
Algeria	14	12	12	9	9
Bahrain	7	6	5	7	7
Comoros	-	-	-	-	-
Djibouti	15	-	-	2	2
Egypt	4	1	1	1	1
Iraq	-	-	-	-	-
Jordan	9	10	9	6	6
Kuwait	-	-	-	-	13
Lebanon	12	7	6	8	8
Libya	6	-	-	-	-
Mauritania	19	15	15	15	16
Morocco	17	14	14	5	5
Oman	13	11	11	13	14
Palestine	10	8	7	10	10
Qatar	11	9	8	11	11
Saudi Arabia	18	13	13	14	15
Somalia	16	-	-	-	-
Sudan	2	3	3	4	4
Syria	1	2	2	-	-
Tunisia	5	4	4	3	3
UAE	8	5	10	12	12
Yemen	3	-	-	-	-

Arab average	42.10	45.66	46.78	38.52	39.12
--------------	-------	-------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Least expensive  
 Most expensive



# 2010 OECD PSTN BASKETS RANKING, 140 CALLS/MONTH, RESIDENTIAL



Total results for PSTN OECD 140 calls residential basket based on 2010 OECD basket, tariffs 2013-2018

Results in USD/PPP including VAT, residential results

	2013	2015	2016	2017	2018
Algeria	118.01	121.07	123.69	61.40	61.40
Bahrain	66.69	65.48	65.48	65.54	65.54
Comoros					
Djibouti	139.36			38.30	36.86
Egypt	26.88	14.94	14.38	13.35	13.02
Iraq					
Jordan	51.24	49.02	49.02	42.58	42.58
Kuwait					73.87
Lebanon	78.32	65.66	65.66	66.90	66.90
Libya	66.13				
Mauritania	144.92	446.25	446.25	261.18	261.18
Morocco	88.55	85.02	81.25	31.05	31.05
Oman	96.84	96.84	96.84	96.84	96.84
Palestine	73.52	73.52	73.52	73.52	73.52
Qatar	64.44	64.44	64.44	64.44	64.44
Saudi Arabia	108.73	106.73	106.73	103.19	107.61
Somalia	109.56				
Sudan	24.92	24.92	24.92	40.82	40.27
Syria	9.38	16.34	17.50		
Tunisia	61.17	38.86	38.86	38.86	38.86
UAE	47.82	39.02	70.00	70.00	65.60
Yemen	31.14				

Arab average	74.09	87.21	89.23	71.20	71.22
--------------	-------	-------	-------	-------	-------

Below Arab average  
 Above Arab average

Ranking for PSTN OECD 140 calls residential basket based on 2010 OECD basket

Residential results

	2013	2015	2016	2017	2018
Algeria	17	14	14	7	7
Bahrain	10	8	7	9	9
Comoros	-	-	-	-	-
Djibouti	18	-	-	3	3
Egypt	3	1	1	1	1
Iraq	-	-	-	-	-
Jordan	6	6	5	6	6
Kuwait	-	-	-	-	13
Lebanon	12	9	8	10	11
Libya	9	-	-	-	-
Mauritania	19	15	15	15	16
Morocco	13	11	11	2	2
Oman	14	12	12	13	14
Palestine	11	10	10	12	12
Qatar	8	7	6	8	8
Saudi Arabia	15	13	13	14	15
Somalia	16	-	-	-	-
Sudan	2	3	3	5	5
Syria	1	2	2	-	-
Tunisia	7	4	4	4	4
UAE	5	5	9	11	10
Yemen	4	-	-	-	-

Least expensive  
 Most expensive



# 2010 OECD PSTN BASKETS RANKING, 420 CALLS/MONTH, RESIDENTIAL



Total results for PSTN OECD 420 calls residential basket based on 2010 OECD basket, tariffs 2013-2018

Results in USD/PPP including VAT, residential results

	2013	2015	2016	2017	2018
Algeria	323.88	329.13	333.62	74.51	74.51
Bahrain	88.58	86.82	86.82	86.92	86.92
Comoros					
Djibouti	276.20			59.51	57.04
Egypt	39.89	20.84	20.74	21.35	19.73
Iraq					
Jordan	58.46	58.20	58.20	55.82	55.82
Kuwait					103.63
Lebanon	177.84	159.69	159.69	161.82	161.82
Libya	91.50				
Mauritania	185.65	1572.22	1572.22	832.75	832.75
Morocco	113.64	106.19	103.16	43.31	43.31
Oman	115.69	115.69	115.69	115.69	115.69
Palestine	140.32	140.32	140.32	140.32	140.32
Qatar	88.67	88.67	88.67	88.67	88.67
Saudi Arabia	121.13	125.92	125.92	122.29	127.13
Somalia	164.50				
Sudan	61.04	61.04	61.04	85.21	79.96
Syria	17.58	31.88	33.12		
Tunisia	77.51	38.86	38.86	38.86	38.86
UAE	58.42	44.70	81.78	81.78	85.29
Yemen	53.38				

Arab average	118.62	198.68	201.32	133.92	131.96
--------------	--------	--------	--------	--------	--------

Below Arab average  
 Above Arab average

Ranking for PSTN OECD 420 calls residential basket based on 2010 OECD basket

Residential results

	2013	2015	2016	2017	2018
Algeria	19	14	14	6	6
Bahrain	8	7	7	9	9
Comoros	-	-	-	-	-
Djibouti	18	-	-	5	5
Egypt	2	1	1	1	1
Iraq	-	-	-	-	-
Jordan	5	5	4	4	4
Kuwait	-	-	-	-	11
Lebanon	16	13	13	14	15
Libya	10	-	-	-	-
Mauritania	17	15	15	15	16
Morocco	11	9	9	3	3
Oman	12	10	10	11	12
Palestine	14	12	12	13	14
Qatar	9	8	8	10	10
Saudi Arabia	13	11	11	12	13
Somalia	15	-	-	-	-
Sudan	6	6	5	8	7
Syria	1	2	2	-	-
Tunisia	7	3	3	2	2
UAE	4	4	6	7	8
Yemen	3	-	-	-	-

Least expensive  
 Most expensive



# 2010 OECD PSTN BASKETS RANKING, 100 CALLS/MONTH, BUSINESS



Total results for PSTN OECD 100 calls business basket based on 2010 OECD basket, tariffs 2013-2018

Results in USD/PPP excluding VAT, residential results

	2013	2015	2016	2017	2018
Algeria	50.47	55.43	56.19		
Bahrain	41.25	41.25	41.25	41.26	41.26
Comoros					
Djibouti	58.68			16.96	16.50
Egypt	13.83	11.89	11.89		
Iraq					
Jordan	54.38	66.05	47.78	44.77	45.68
Kuwait					
Lebanon	42.85	35.84	35.84	36.22	36.22
Libya	43.83				
Mauritania	112.65	185.34	185.34	114.62	114.62
Morocco	56.95	54.53	52.43	52.43	52.43
Oman	65.60	58.46	58.46	58.46	58.46
Palestine	45.01	45.01	45.01	45.01	45.01
Qatar	140.67	140.67	140.67		
Saudi Arabia				73.58	73.58
Somalia	67.20				
Sudan					
Syria	4.04	8.73	9.77		
Tunisia	50.84	54.64	54.57	22.07	22.07
UAE	71.10	68.39	70.82	83.38	71.32
Yemen	10.25				

Arab average	54.68	63.56	62.31	53.53	52.47
--------------	-------	-------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for PSTN OECD 100 calls business basket based on 2010 OECD basket

Residential results

	2013	2015	2016	2017	2018
Algeria	8	8	9	-	-
Bahrain	4	4	4	4	4
Comoros	-	-	-	-	-
Djibouti	12	-	-	1	1
Egypt	3	2	2	-	-
Iraq	-	-	-	-	-
Jordan	10	10	6	5	6
Kuwait	-	-	-	-	-
Lebanon	5	3	3	3	3
Libya	6	-	-	-	-
Mauritania	16	13	13	11	11
Morocco	11	6	7	7	7
Oman	13	9	10	8	8
Palestine	7	5	5	6	5
Qatar	17	12	12	-	-
Saudi Arabia	-	-	-	9	10
Somalia	14	-	-	-	-
Sudan	-	-	-	-	-
Syria	1	1	1	-	-
Tunisia	9	7	8	2	2
UAE	15	11	11	10	9
Yemen	2	-	-	-	-

■ Least expensive  
■ Most expensive



# 2010 OECD PSTN BASKETS RANKING, 260 CALLS/MONTH, BUSINESS



Total results for PSTN OECD 260 calls business basket based on 2010 OECD basket, tariffs 2013-2018

Results in USD/PPP excluding VAT, residential results

	2013	2015	2016	2017	2018
Algeria	158.09	175.96	181.89		
Bahrain	140.21	140.21	140.21	140.24	140.24
Comoros					
Djibouti	306.52			83.19	79.66
Egypt	60.01	30.90	30.90		
Iraq					
Jordan	99.04	143.53	109.81	86.35	87.26
Kuwait					
Lebanon	124.86	97.66	97.66	100.63	100.63
Libya	150.54				
Mauritania	374.39	549.26	549.26	369.42	369.42
Morocco	165.57	135.53	112.54	112.54	112.54
Oman	179.71	179.71	179.71	179.71	179.71
Palestine	115.76	115.76	115.76	115.76	115.76
Qatar	242.11	242.11	242.11		
Saudi Arabia				173.44	173.44
Somalia	177.56				
Sudan					
Syria	25.20	37.15	39.41		
Tunisia	79.84	101.99	101.99	22.07	22.07
UAE	163.73	147.71	173.17	162.70	151.27
Yemen	79.98				

Arab average	155.48	161.34	159.57	140.55	139.27
--------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for PSTN OECD 260 calls business basket based on 2010 OECD basket

Residential results

	2013	2015	2016	2017	2018
Algeria	10	10	11	-	-
Bahrain	8	7	8	7	7
Comoros	-	-	-	-	-
Djibouti	16	-	-	2	2
Egypt	2	1	1	-	-
Iraq	-	-	-	-	-
Jordan	5	8	5	3	3
Kuwait	-	-	-	-	-
Lebanon	7	3	3	4	4
Libya	9	-	-	-	-
Mauritania	17	13	13	11	11
Morocco	12	6	6	5	5
Oman	14	11	10	10	10
Palestine	6	5	7	6	6
Qatar	15	12	12	-	-
Saudi Arabia	-	-	-	9	9
Somalia	13	-	-	-	-
Sudan	-	-	-	-	-
Syria	1	2	2	-	-
Tunisia	3	4	4	1	1
UAE	11	9	9	8	8
Yemen	4	-	-	-	-

■ Least expensive  
■ Most expensive





# OBSERVATIONS FROM PSTN TIME SERIES RESULTS

- There were only a few price changes since the last update in 2017, with most operators not making any changes to pricing.
- The impact of the changes was generally very small, and in some cases, did not have any effect on the basket results
- The most notable price changes 2017 - 2018:
  - Egypt made changes to international call rates, which resulted in small decreases in the residential baskets.
  - Jordan made small rental increases on its business offerings, resulting in an increase in the cost of the business baskets.
  - Sudan also made changes to international call rates, which resulted in small changes in the residential baskets.
  - UAE made changes to selected residential and business package rentals.
  - Both Saudi Arabia and UAE have now applied 5% VAT to residential telecoms services, which increases residential costs in both these countries.
- Average costs across all residential and business baskets have remained broadly static since last year, with only very small changes observed..
- Over the period 2013-2018, the average price has not changed dramatically, with some overall increases and decreases depending on the basket. Changes are driven in part by price changes, but also by changes in data availability for selected countries.

*\* Countries with gaps in the tariff information are not considered.*





# MOBILE BASKET RESULTS 2018



# MOBILE TARIFF DATA ISSUES

- Tariff restrictions:
  - Only pre-paid for Comoros, Somalia
  - One operator only for Comoros, Djibouti, Somalia
- Otherwise two operators are covered for each country
- A total of 1000 tariff packages covered for 41 operators in 22 countries

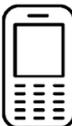




# OECD MOBILE BASKETS 2010 DEFINITIONS

- The OECD adopted the current baskets for mobile voice in March 2010, with additional data usage included from 2013. The key information about the basket definitions is shown below.
  - The following 11 pages show the results using the latest basket definitions
  - Pre- and Post-paid tariffs are included for all baskets
  - Handset data baskets included (introduced 2013 with an additional set of 5 baskets)

Basket	Calls/month	Call distribution				SMS	Data MB
		To fixed	Mobile On	Mobile Off	Voicemail		
30 calls basket	30	16%	55%	25%	4%	100	0
100 calls basket	100	17%	52%	28%	3%	140	0
300 calls basket	300	14%	46%	37%	3%	225	0
900 calls basket	900	14%	55%	28%	3%	350	0
40 calls prepaid basket	40	14%	64%	18%	4%	60	0
400 messages basket	8	8%	55%	25%	12%	400	0
30 calls + 100 MB	30	16%	55%	25%	4%	100	100
100 calls + 500 MB	100	17%	52%	28%	3%	140	500
300 calls + 1 GB	300	14%	46%	37%	3%	225	1000
900 calls + 2 GB	900	14%	55%	28%	3%	350	2000
100 calls + 2 GB	100	14%	52%	28%	3%	140	2000

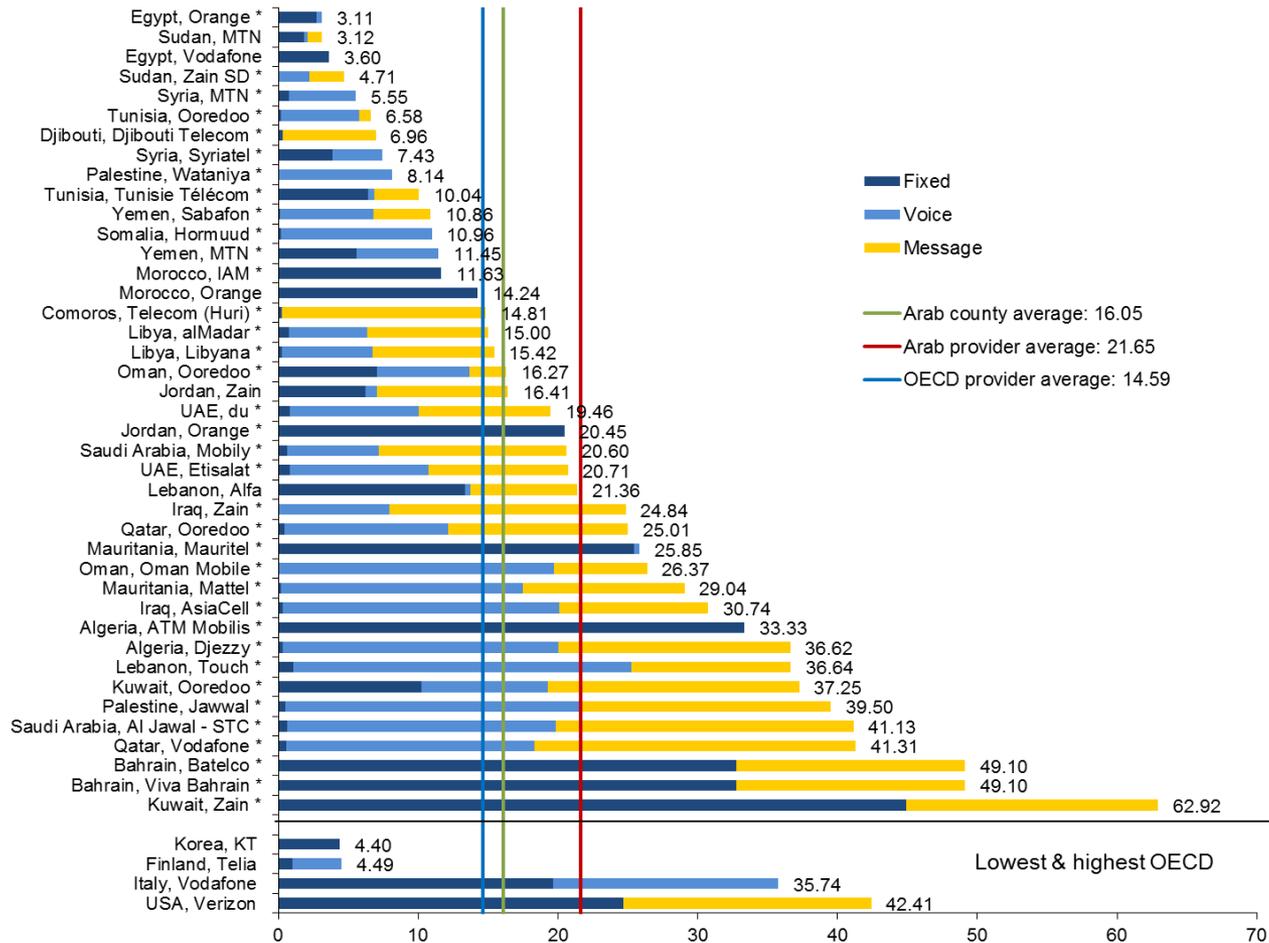


# 30 CALLS/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



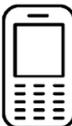
## 30 calls basket based on 2010 OECD mobile basket

Tariffs as of January 2018



Selective discounts included.

\* marks pre-paid tariffs.

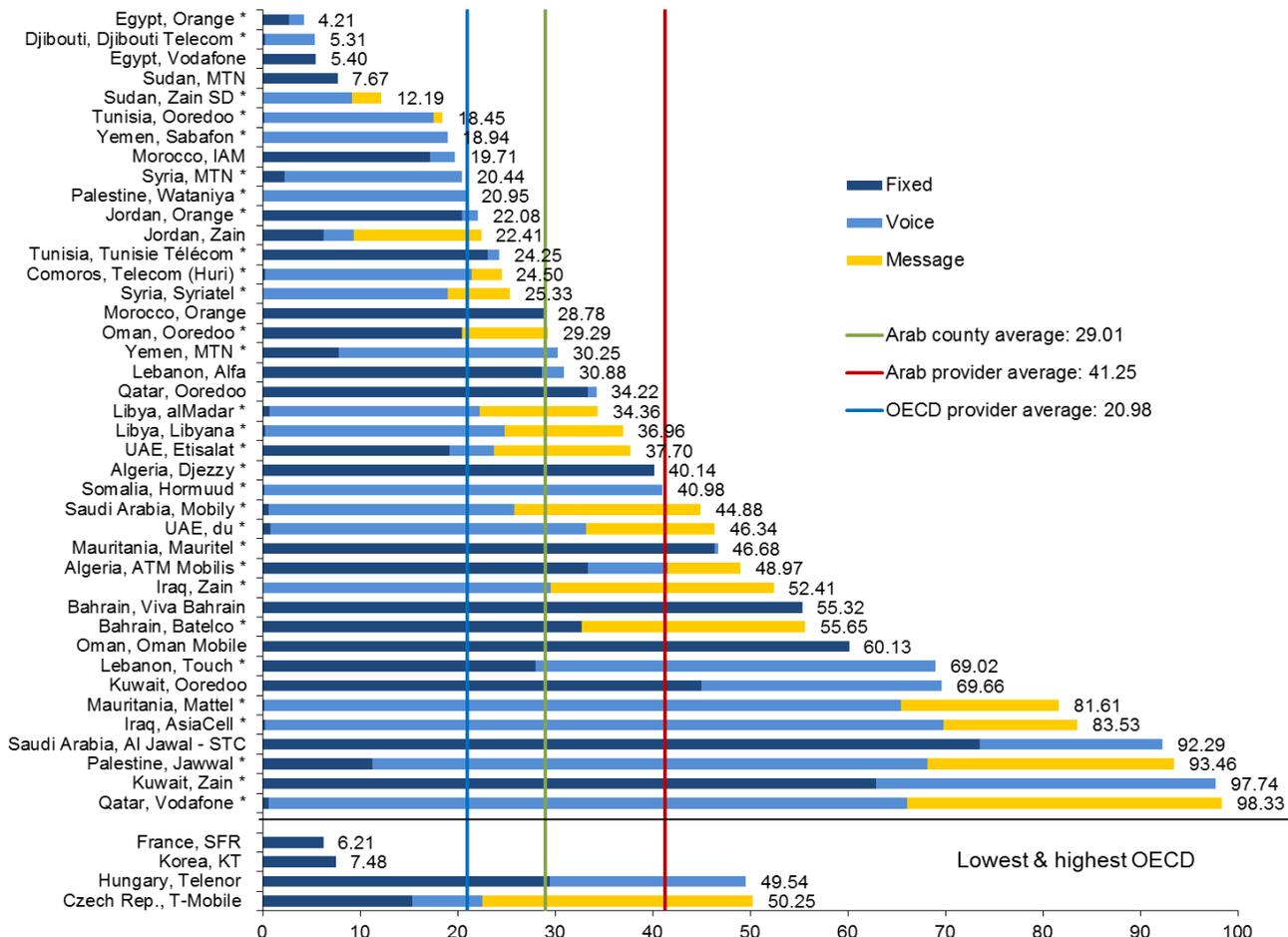


# 100 CALLS/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 100 calls basket based on 2010 OECD mobile basket

Tariffs as of January 2018



Selective discounts included.

\* marks pre-paid tariffs.

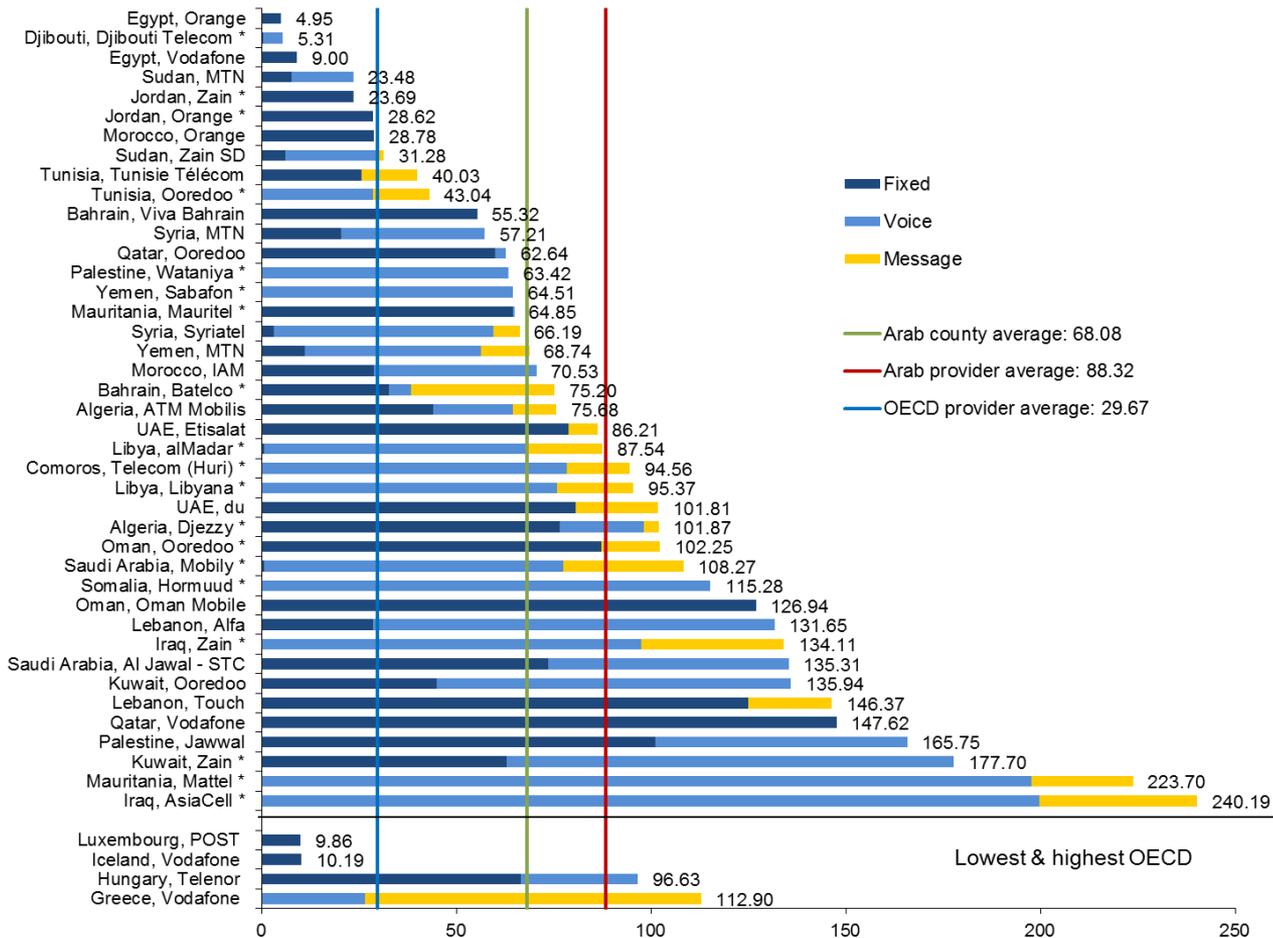


# 300 CALLS/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 300 calls basket based on 2010 OECD mobile basket

Tariffs as of January 2018



Selective discounts included.

\* marks pre-paid tariffs.

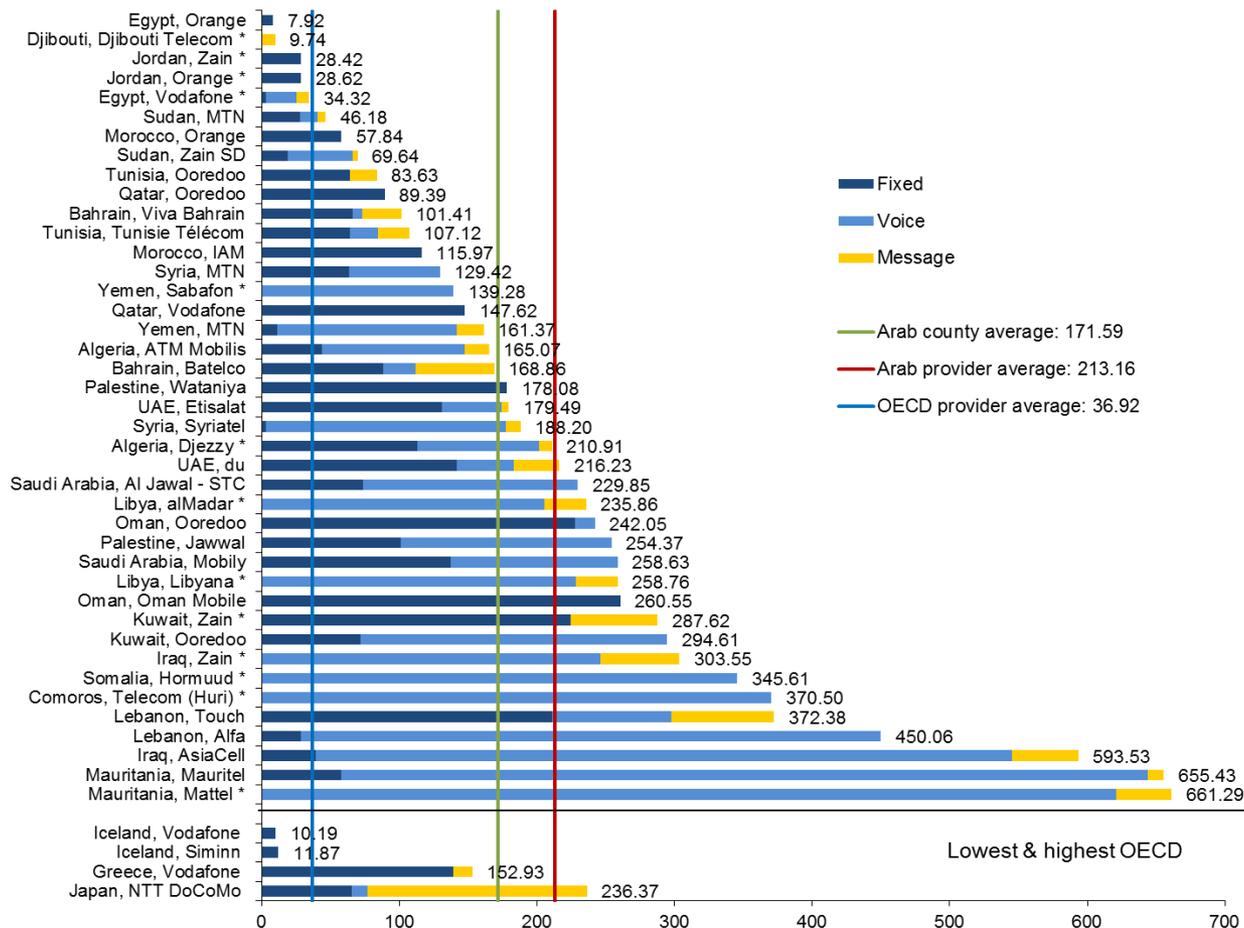


# 900 CALLS/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 900 calls basket based on 2010 OECD mobile basket

Tariffs as of January 2018



Selective discounts included.

\* marks pre-paid tariffs.

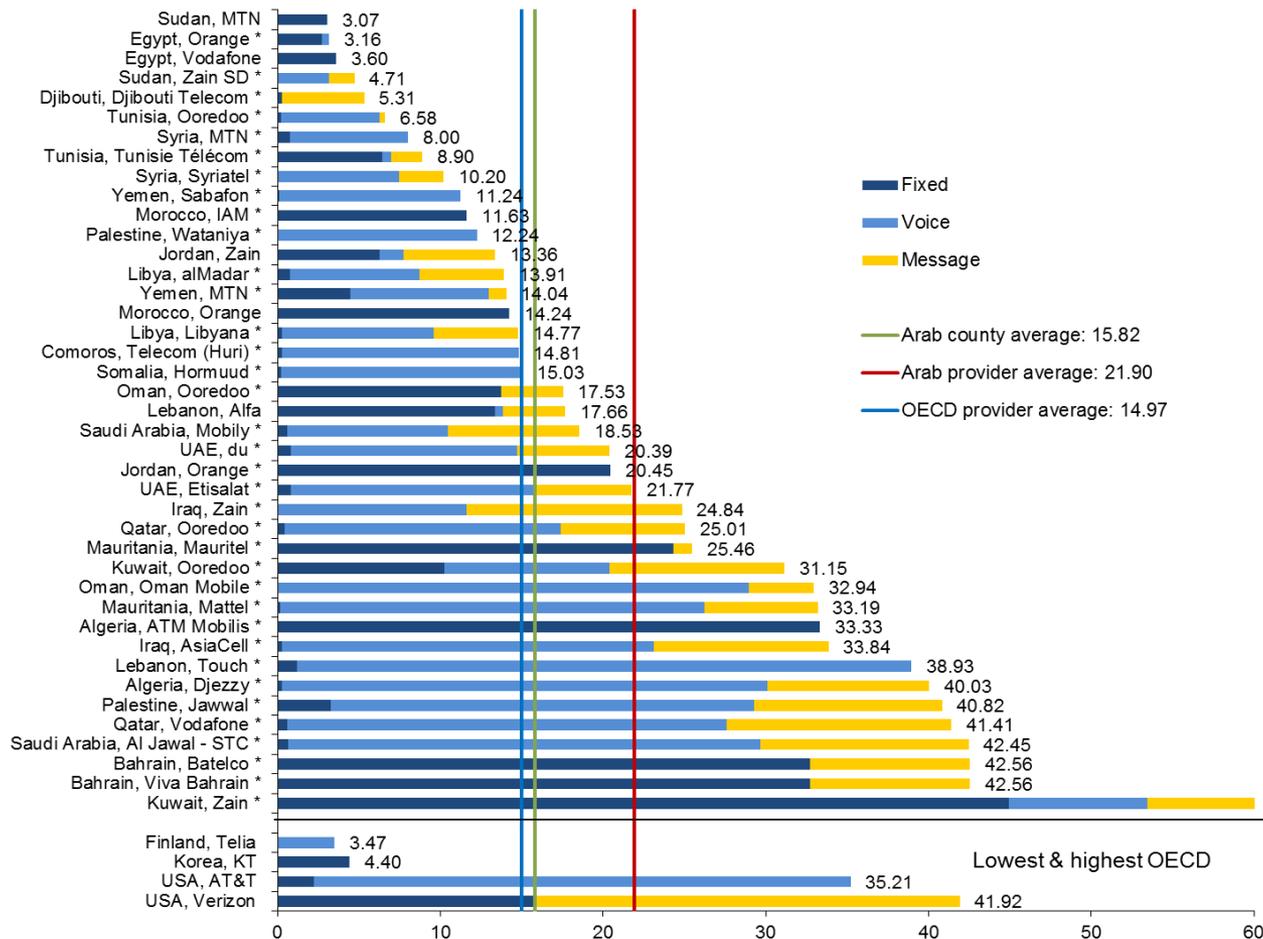


# 40 CALLS/MONTH PREPAID BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 40 calls prepaid basket based on 2010 OECD mobile basket

Tariffs as of January 2018



Please note:  
 No data for Djibouti.  
 Selective discounts included.  
 \* marks pre-paid tariffs.

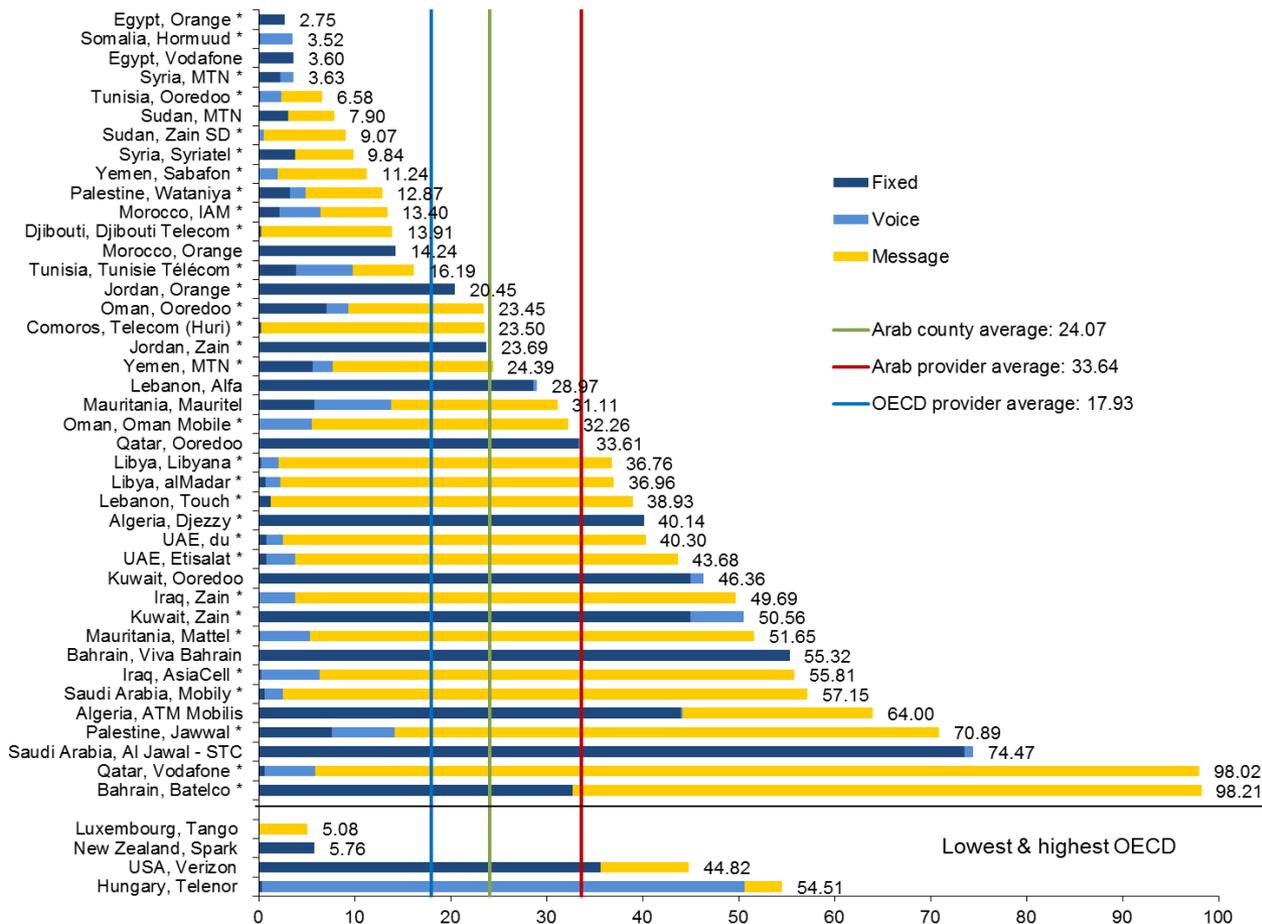


# 400 MESSAGES/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 400 messages basket based on 2010 OECD mobile basket

Tariffs as of January 2018



Selective discounts included.

\* marks pre-paid tariffs.

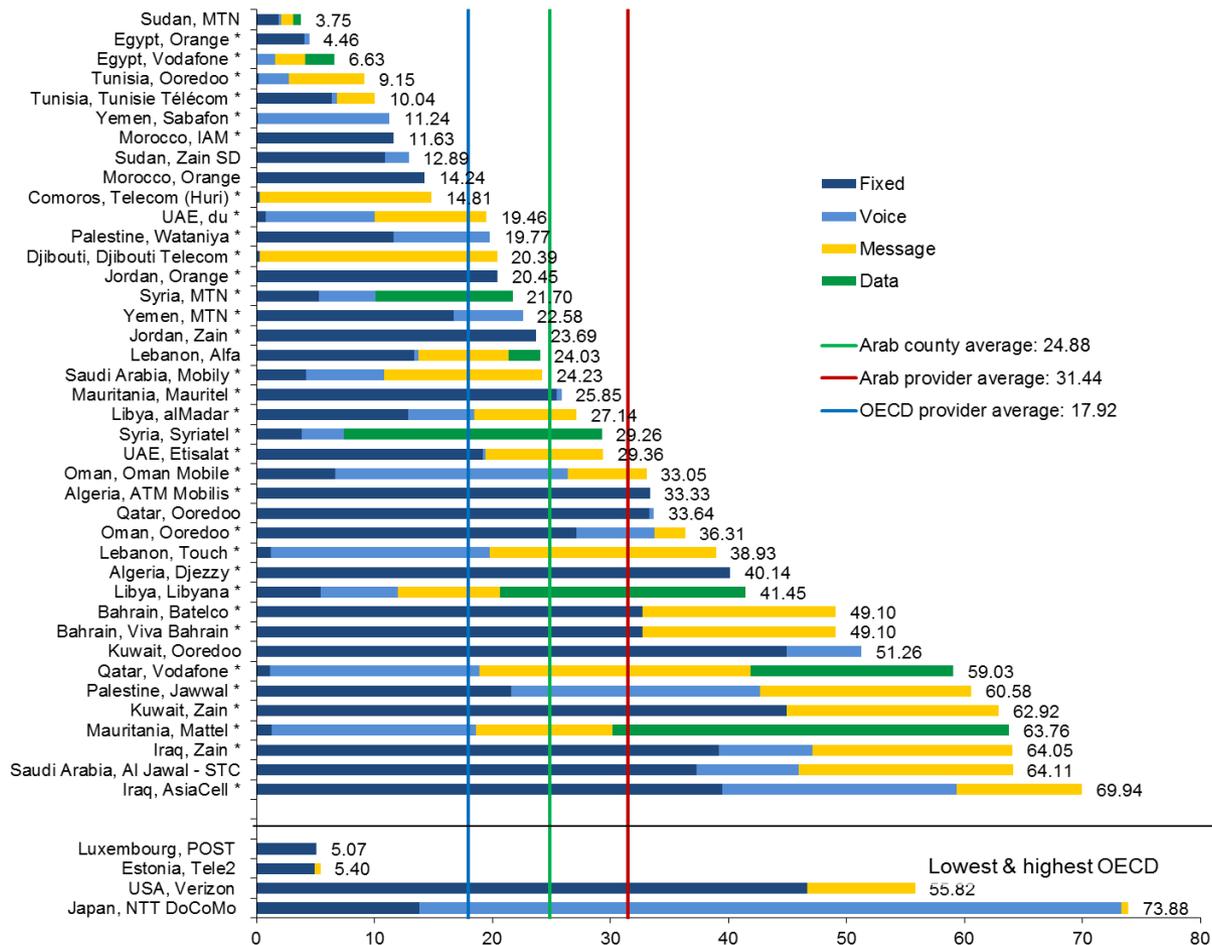


# 30 CALLS + 100 MB/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 30 calls + 100 MB based on 2010 OECD mobile basket

Tariffs as of January 2018



Please note:  
No data for Somalia.  
Selective discounts included.

\* marks pre-paid tariffs.

The data charges shown on the graph refer to overage charges only. Fixed data charges may be embedded in the monthly fixed charges.

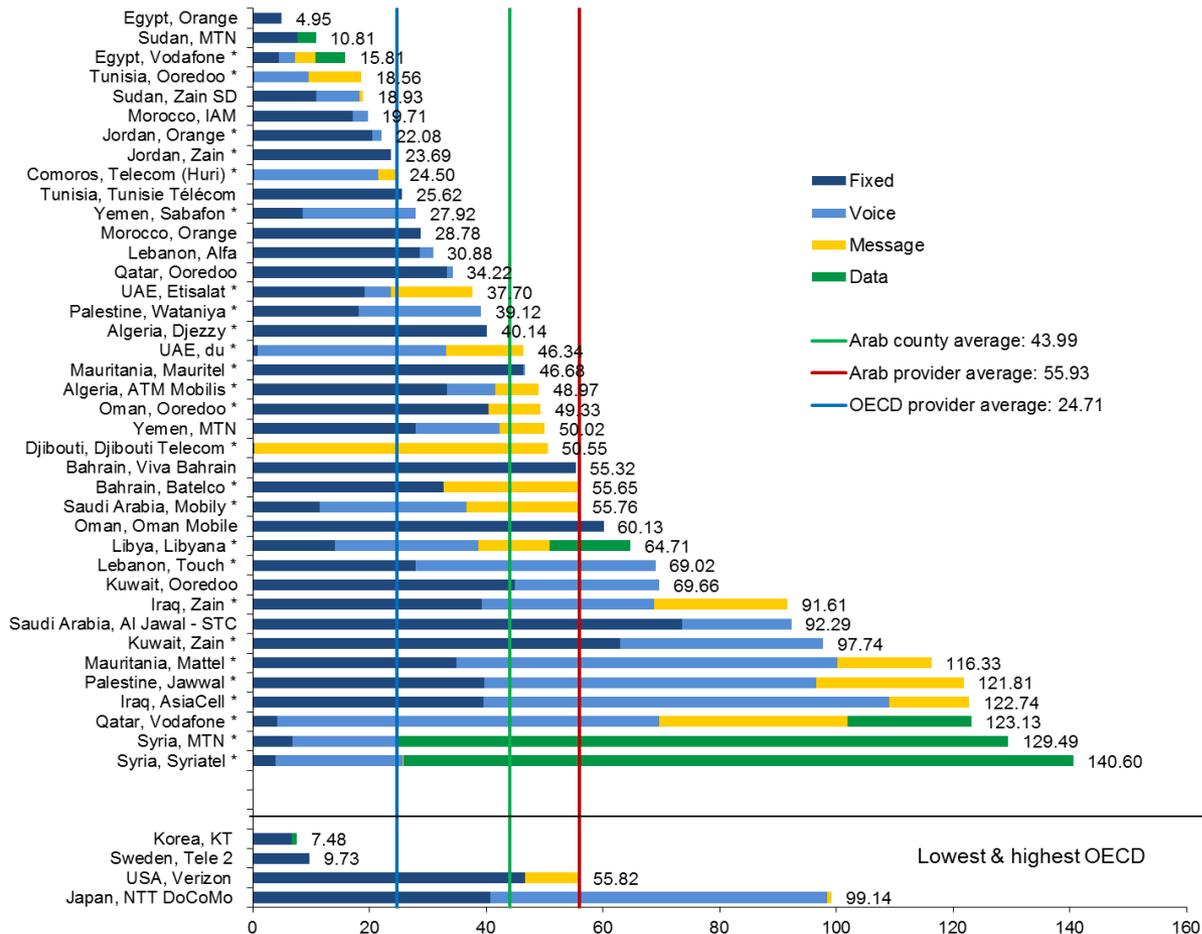


# 100 CALLS + 500 MB/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 100 calls + 500 MB based on 2010 OECD mobile basket

Tariffs as of January 2018



Please note:  
No data for Somalia.  
Selective discounts included.

\* marks pre-paid tariffs.

The data charges shown on the graph refer to overage charges only. Fixed data charges may be embedded in the monthly fixed charges.

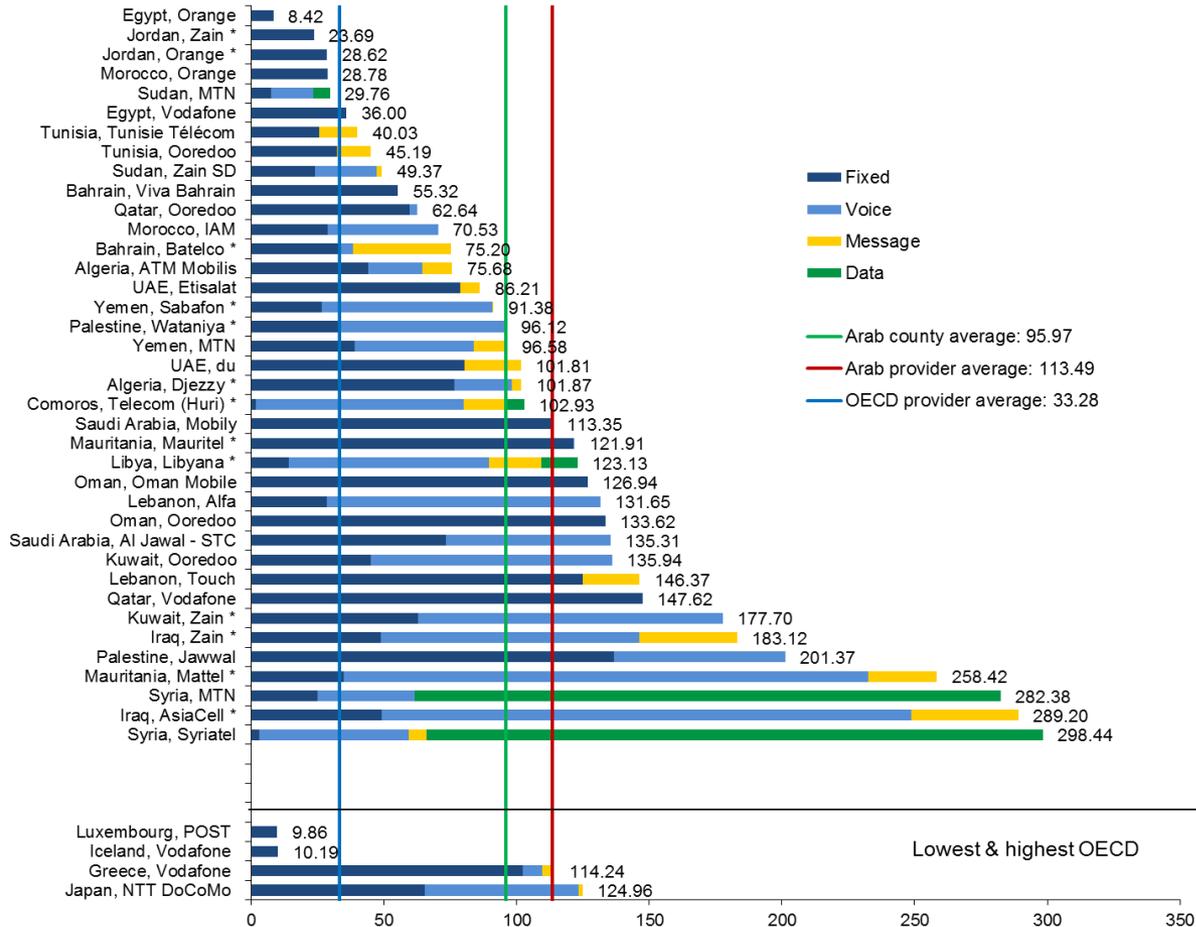


# 300 CALLS + 1 GB/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 300 calls + 1 GB based on 2010 OECD mobile basket

Tariffs as of January 2018



Please note:  
No data for Somalia.  
Selective discounts included.

\* marks pre-paid tariffs.

The data charges shown on the graph refer to overage charges only. Fixed data charges may be embedded in the monthly fixed charges.

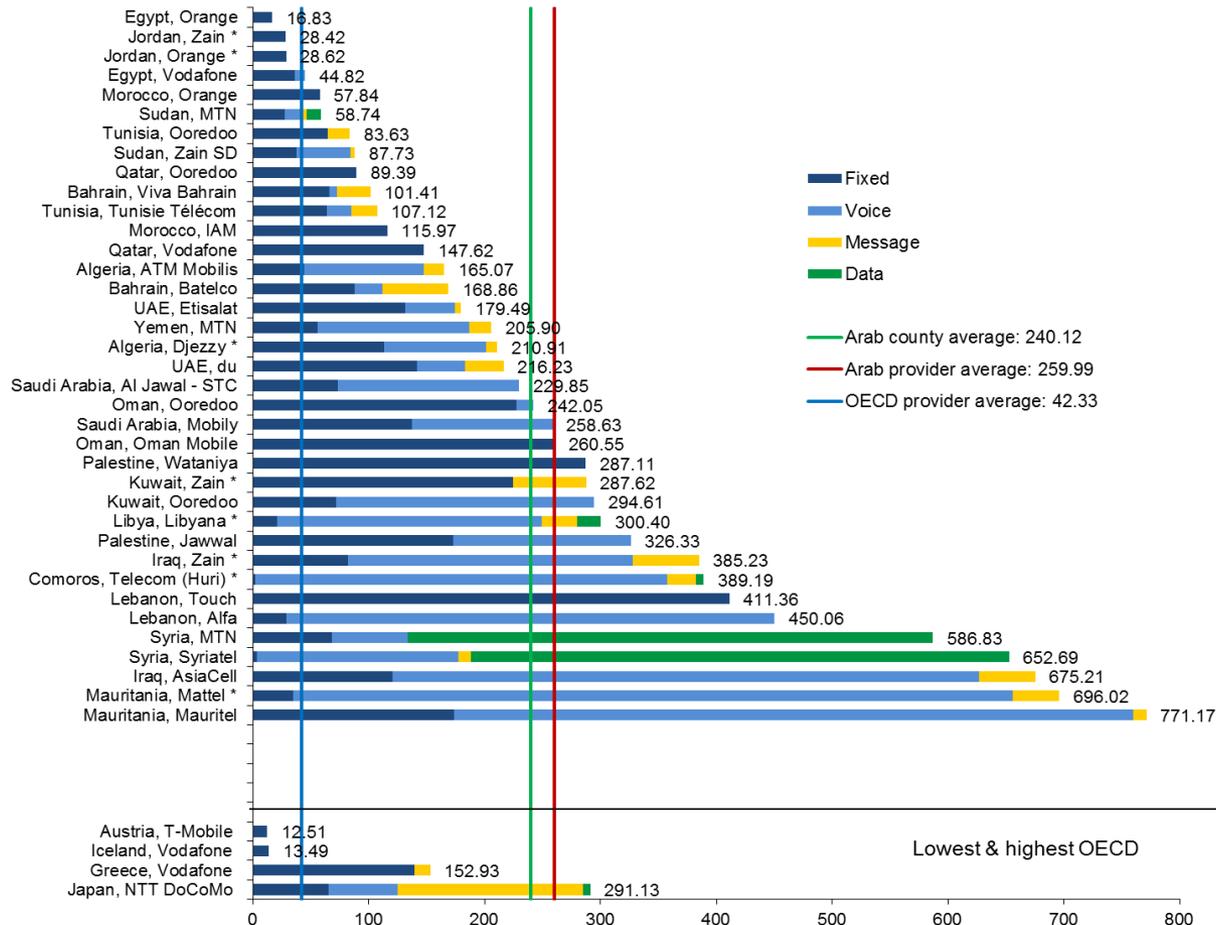


# 900 CALLS + 2 GB/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 900 calls + 2 GB based on 2010 OECD mobile basket

Tariffs as of January 2018



Please note:  
No data for Somalia.  
Selective discounts included.

\* marks pre-paid tariffs.

The data charges shown on the graph refer to overage charges only. Fixed data charges may be embedded in the monthly fixed charges.

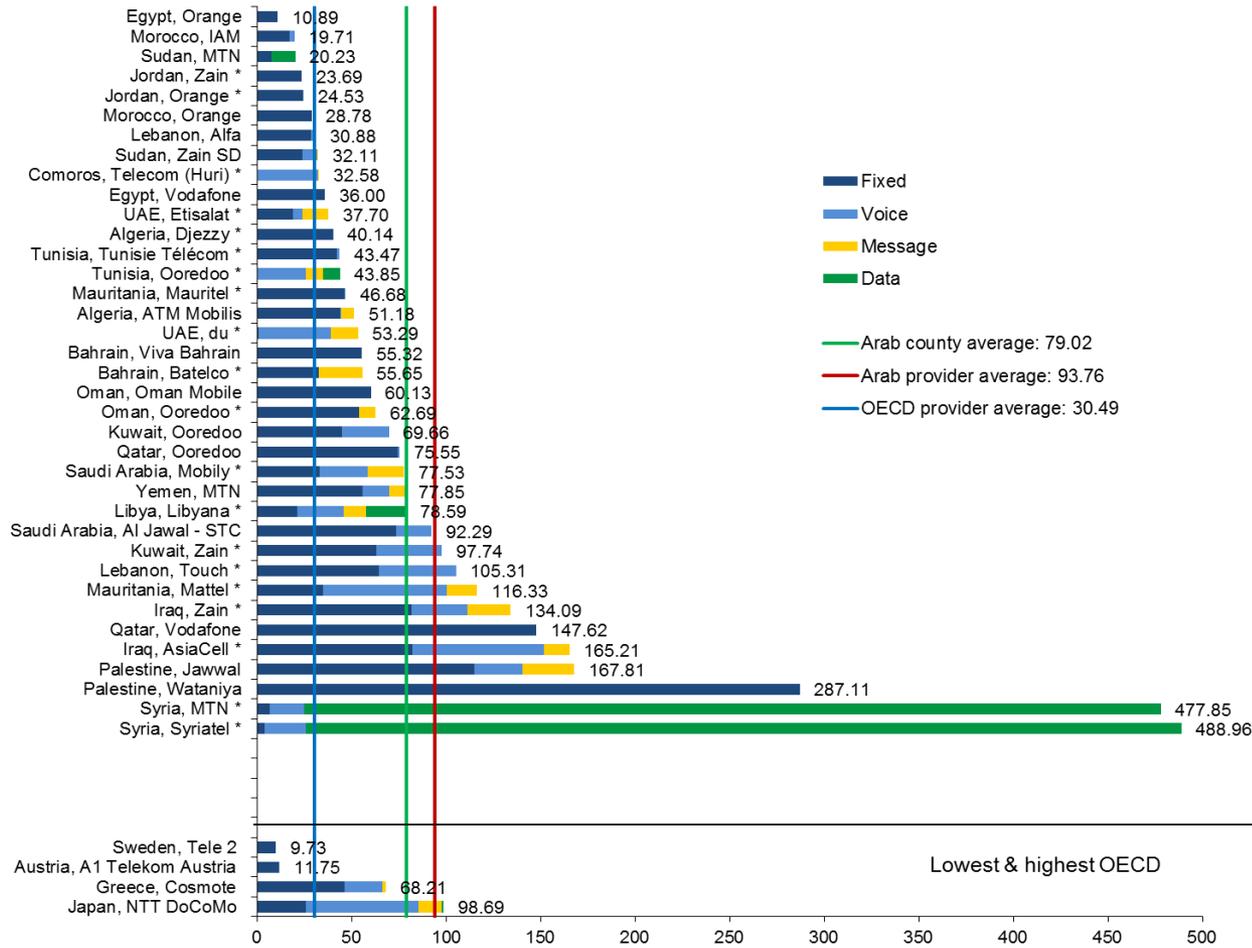


# 100 CALLS + 2 GB/MONTH BASKET RESULT BASED ON 2010 OECD MOBILE BASKET



## 100 calls + 2 GB based on 2010 OECD mobile basket

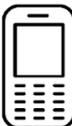
Tariffs as of January 2018



Please note:  
No data for Somalia.  
Selective discounts included.

\* marks pre-paid tariffs.

The data charges shown on the graph refer to overage charges only. Fixed data charges may be embedded in the monthly fixed charges.





# OBSERVATIONS FROM MOBILE BASKET RESULTS

- The cheapest and most expensive countries, based on the cheapest result per country, are :

	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd
30 calls	Egypt	Sudan	Syria	Bahrain	Kuwait	Algeria
100 calls	Egypt	Djibouti	Sudan	Kuwait	Bahrain	Iraq
300 calls	Egypt	Djibouti	Sudan	Kuwait	Iraq	Lebanon
900 calls	Egypt	Djibouti	Jordan	Mauritania	Lebanon	Comoros
40 calls prepaid	Sudan	Egypt	Djibouti	Bahrain	Algeria	Kuwait
400 messages	Egypt	Somalia	Syria	Saudi Arabia	Bahrain	Iraq
30 calls + 100 MB	Sudan	Egypt	Tunisia	Iraq	Kuwait	Bahrain
100 calls + 500 MB	Egypt	Sudan	Tunisia	Syria	Iraq	Kuwait
300 calls + 1 GB	Egypt	Jordan	Morocco	Syria	Iraq	Kuwait
900 calls + 2 GB	Egypt	Jordan	Morocco	Mauritania	Syria	Lebanon
100 calls + 2 GB	Egypt	Morocco	Sudan	Syria	Palestine	Iraq

- A comparison between the OECD and Arab averages is shown in the next slide, both per country and per provider
- There is a clear correlation between the size of the basket (in terms of number of calls and volume of data), and the extent to which countries fall below the OECD average. For smaller baskets, more countries fall below the OECD average
  - For the lower use voice only or voice and data baskets, e.g. 30 calls, 100 calls, 40 calls prepaid, 400 message and 30 calls + 100 MB and 100 calls + 500 MB baskets, between 5 and 13 Arab countries have price levels either below or on par with the OECD average.
  - This number steadily declines as the number of calls and the data volume increases.
- The average result for the Arab providers is consistently higher than the OECD provider average across all mobile voice baskets, and the larger the basket the greater the variation.
- Baskets which incorporate handset data show a broad variation in price across the Arab providers – the difference becoming more marked for baskets with higher data requirements, indicating that in a number of countries, high mobile data use is still prohibitively expensive, and consequently, mobile data use is probably more limited.
- Similar to the voice baskets, the Arab provider average for the data baskets is typically much higher than the OECD one, although this is very much skewed by particularly expensive countries at the upper end.
- Where data costs are shown on the graph, these refer to overage charges or data add-on packages, rather than data included in the basic voice tariff. Where overage charges are higher, this indicates a limited range of data options, and mobile handset data services are much less well established, and are geared only towards very modest use. Over time, these costs should fall significantly, as mobile data use becomes more commonplace, and operators offer more competitively priced tariffs with more data included.
- The average number of tariff packages offered by the Arab operators is down slightly from 26 per operator in 2017, to 24 per operator in 2018.





# COMPARISON OF OECD AND ARAB AVERAGES

	OECD- USD PPP inc VAT/month		Arab countries - USD PPP inc VAT/month	
	Per country average	Per provider average	Per country average	Per provide average
30 calls	12.13	14.59	16.05	21.65
100 calls	17.75	20.98	29.01	41.25
300 calls	25.51	29.67	68.08	88.32
900 calls	30.19	36.92	171.59	213.16
40 calls prepaid	12.55	14.97	15.82	21.90
400 messages	15.42	17.93	24.07	33.64
30 calls + 100 MB	14.49	17.92	24.88	31.44
100 calls + 500 MB	20.57	24.71	43.99	55.93
300 calls + 1 GB	28.38	33.28	95.97	113.49
900 calls + 2 GB	34.87	42.33	240.12	259.99
100 calls + 2 GB	26.75	30.49	79.02	93.76

The Arab average is consistently higher than the OECD average, with higher usage baskets being significantly more expensive.

This is true for both the per country and the per provider averages.

	% that Arab average is higher or lower than OECD average	
	Per country average	Per provider average
30 calls	32%	48%
100 calls	63%	97%
300 calls	167%	198%
900 calls	468%	477%
40 calls prepaid	26%	46%
400 messages	56%	88%
30 calls + 100 MB	72%	75%
100 calls + 500 MB	114%	126%
300 calls + 1 GB	238%	241%
900 calls + 2 GB	589%	514%
100 calls + 2 GB	195%	208%





# MOBILE TIME SERIES ANALYSIS AND RANKING TABLES 2013-2018

# 2010 OECD MOBILE BASKETS RANKING, 30 CALLS/MONTH



Total results for OECD mobile voice - 30 calls basket  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	16.57	13.89	13.89	16.76	33.33
Bahrain	19.91	19.91	19.91	49.10	49.10
Comoros	26.72	26.72	26.72	14.81	14.81
Djibouti					
Egypt	3.97	3.11	3.11	3.11	3.11
Iraq	31.60	24.20	24.20	24.84	24.84
Jordan	13.22	12.38	14.47	14.47	16.41
Kuwait	35.41	35.80	35.80	38.94	37.25
Lebanon	31.79	36.59	23.66	21.36	21.36
Libya	14.75	9.79	14.75	15.00	15.00
Mauritania	39.30	30.01	30.01	23.53	25.85
Morocco	22.10	11.63	11.63	11.63	11.63
Oman	27.32	25.07	24.71	15.70	16.27
Palestine	21.81	22.11	22.04	21.54	8.14
Qatar	39.05	17.90	24.10	24.35	25.01
Saudi Arabia	28.08	28.18	20.60	20.60	20.60
Somalia				8.22	10.96
Sudan	2.78	2.78	3.20	3.12	3.12
Syria	3.84	4.11	4.11	5.55	5.55
Tunisia	12.65	9.70	6.41	6.58	6.58
UAE	17.16	18.72	18.72	17.15	19.46
Yemen	8.02	8.02	8.02	10.73	

Arab average	20.80	18.03	17.50	17.48	18.42
--------------	-------	-------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for OECD mobile 30 calls basket

	2013	2015	2016	2017	2018
Algeria	8	9	7	12	18
Bahrain	10	12	11	21	20
Comoros	13	16	18	9	8
Djibouti	-	-	-	-	-
Egypt	3	2	1	1	1
Iraq	16	14	16	19	15
Jordan	6	8	8	8	11
Kuwait	18	19	20	20	19
Lebanon	17	20	14	15	14
Libya	7	6	9	10	9
Mauritania	20	18	19	17	17
Morocco	12	7	6	7	7
Oman	14	15	17	11	10
Palestine	11	13	13	16	5
Qatar	19	10	15	18	16
Saudi Arabia	15	17	12	14	13
Somalia	-	-	-	5	6
Sudan	1	1	2	2	2
Syria	2	3	3	3	3
Tunisia	5	5	4	4	4
UAE	9	11	10	13	12
Yemen	4	4	5	6	-

■ Least expensive  
■ Most expensive

Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries



# 2010 OECD MOBILE BASKETS RANKING, 100 CALLS/MONTH



Total results for OECD mobile voice - 100 calls basket  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	27.75	33.33	33.33	40.14	40.14
Bahrain	35.22	27.58	27.58	55.32	55.32
Comoros	72.06	72.06	72.06	24.50	24.50
Djibouti					
Egypt	8.28	7.72	5.18	4.95	4.21
Iraq	86.25	39.08	53.72	47.83	52.41
Jordan	18.72	14.47	14.47	14.47	22.08
Kuwait	83.64	53.93	69.60	69.66	69.66
Lebanon	77.71	69.02	56.87	30.88	30.88
Libya	34.12	29.21	34.12	34.36	34.36
Mauritania	108.96	54.53	47.16	34.85	46.68
Morocco	28.78	23.25	28.78	19.41	19.71
Oman	80.87	73.75	55.21	28.65	29.29
Palestine	69.67	45.56	41.11	41.11	20.95
Qatar	67.25	43.19	52.62	34.22	34.22
Saudi Arabia	68.72	64.55	44.88	40.35	44.88
Somalia				30.71	40.98
Sudan	7.67	7.67	7.67	7.67	7.67
Syria	13.26	14.07	14.07	20.44	20.44
Tunisia	19.57	19.39	19.22	18.45	18.45
UAE	40.80	35.60	35.60	35.60	37.70
Yemen	24.63	24.63	24.63	18.94	

Arab average	48.70	37.63	36.89	31.07	32.73
--------------	-------	-------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for OECD mobile 100 calls basket

	2013	2015	2016	2017	2018
Algeria	7	10	9	16	14
Bahrain	10	8	7	20	19
Comoros	15	19	20	8	8
Djibouti	-	-	-	-	-
Egypt	2	2	1	1	1
Iraq	19	12	16	19	18
Jordan	4	4	4	3	7
Kuwait	18	15	19	21	20
Lebanon	16	18	18	11	10
Libya	9	9	10	13	12
Mauritania	20	16	14	14	17
Morocco	8	6	8	6	4
Oman	17	20	17	9	9
Palestine	14	14	12	18	6
Qatar	12	13	15	12	11
Saudi Arabia	13	17	13	17	16
Somalia	-	-	-	10	15
Sudan	1	1	2	2	2
Syria	3	3	3	7	5
Tunisia	5	5	5	4	3
UAE	11	11	11	15	13
Yemen	6	7	6	5	-

■ Least expensive  
■ Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries

# 2010 OECD MOBILE BASKETS RANKING, 300 CALLS/MONTH



Total results for OECD mobile voice - 300 calls basket  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	44.74	66.29	66.29	66.29	75.68
Bahrain	86.47	55.32	52.21	55.32	55.32
Comoros	194.63	194.63	194.63	94.56	94.56
Djibouti					
Egypt	8.28	12.42	12.42	9.91	4.95
Iraq	237.51	113.36	145.83	126.76	134.11
Jordan	35.89	19.34	19.34	18.08	23.69
Kuwait	191.82	67.81	91.13	135.94	135.94
Lebanon	134.34	149.14	149.14	131.65	131.65
Libya	87.30	83.18	87.30	87.54	87.54
Mauritania	295.81	217.20	217.20	75.62	64.85
Morocco	125.56	28.78	28.78	28.78	28.78
Oman	134.12	141.67	122.31	102.07	102.25
Palestine	139.07	110.55	64.66	64.66	63.42
Qatar	80.37	84.47	75.89	62.64	62.64
Saudi Arabia	110.49	98.73	98.73	64.50	108.27
Somalia				86.14	115.28
Sudan	22.74	23.60	26.28	23.48	23.48
Syria	26.62	31.59	31.59	57.21	57.21
Tunisia	83.34	44.28	29.46	25.48	40.03
UAE	81.01	84.10	84.10	84.10	86.21
Yemen	73.23	73.23	73.23	56.91	

<b>Arab average</b>	109.67	84.98	83.53	69.41	74.79
---------------------	--------	-------	-------	-------	-------

Below Arab average  
 Above Arab average

Ranking for OECD mobile 300 calls basket

	2013	2015	2016	2017	2018
Algeria	5	8	9	12	11
Bahrain	10	7	7	6	6
Comoros	18	19	19	17	14
Djibouti	-	-	-	-	-
Egypt	1	1	1	1	1
Iraq	19	16	17	19	19
Jordan	4	2	2	2	3
Kuwait	17	9	14	21	20
Lebanon	15	18	18	20	18
Libya	11	11	13	16	13
Mauritania	20	20	20	13	10
Morocco	13	4	4	5	4
Oman	14	17	16	18	15
Palestine	16	15	8	11	9
Qatar	7	13	11	9	8
Saudi Arabia	12	14	15	10	16
Somalia	-	-	-	15	17
Sudan	2	3	3	3	2
Syria	3	5	6	8	7
Tunisia	9	6	5	4	5
UAE	8	12	12	14	12
Yemen	6	10	10	7	-

Least expensive  
 Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries

# 2010 OECD MOBILE BASKETS RANKING, 900 CALLS/MONTH



Total results for OECD mobile voice - 900 calls basket  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	91.14	91.14	91.14	72.01	165.07
Bahrain	135.71	88.05	89.34	138.17	101.41
Comoros	564.30	564.30	564.30	370.50	370.50
Djibouti					
Egypt	18.63	30.21	30.21	20.93	7.92
Iraq	593.53	366.85	366.85	292.12	303.55
Jordan	46.76	24.01	24.01	28.62	28.42
Kuwait	323.57	136.07	109.11	224.70	287.62
Lebanon	326.47	395.26	395.26	372.38	372.38
Libya	235.62	235.62	235.62	235.86	235.86
Mauritania	867.57	592.90	592.90	642.69	655.43
Morocco	289.24	57.84	57.84	57.84	57.84
Oman	227.52	242.05	242.05	242.05	242.05
Palestine	456.77	314.87	297.21	155.53	178.08
Qatar	147.62	147.62	146.43	89.39	89.39
Saudi Arabia	202.62	221.89	222.49	221.35	229.85
Somalia				267.77	345.61
Sudan	51.86	65.42	70.33	69.64	46.18
Syria	59.69	71.06	71.06	129.42	129.42
Tunisia	238.19	128.11	79.26	83.63	83.63
UAE	235.28	261.23	236.37	176.53	179.49
Yemen	180.40	180.40	180.40	139.28	

<b>Arab average</b>	264.63	210.75	205.11	191.92	205.49
---------------------	--------	--------	--------	--------	--------

Below Arab average  
 Above Arab average

Ranking for OECD mobile 900 calls basket

	2013	2015	2016	2017	2018
Algeria	5	7	8	5	9
Bahrain	6	6	7	9	7
Comoros	18	19	19	19	18
Djibouti	-	-	-	-	-
Egypt	1	2	2	1	1
Iraq	19	17	17	18	16
Jordan	2	1	1	2	2
Kuwait	15	9	9	14	15
Lebanon	16	18	18	20	19
Libya	12	13	13	15	13
Mauritania	20	20	20	21	20
Morocco	14	3	3	3	4
Oman	10	14	15	16	14
Palestine	17	16	16	11	10
Qatar	7	10	10	7	6
Saudi Arabia	9	12	12	13	12
Somalia	-	-	-	17	17
Sudan	3	4	4	4	3
Syria	4	5	5	8	8
Tunisia	13	8	6	6	5
UAE	11	15	14	12	11
Yemen	8	11	11	10	-

Least expensive  
 Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries

# 2010 OECD MOBILE BASKETS RANKING, 40 CALLS/MONTH PREPAID



Total results for OECD mobile voice - 40 calls prepaid basket  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	10.12	6.63	6.63	10.13	33.33
Bahrain	18.90	18.90	18.90	42.56	42.56
Comoros	29.03	29.03	29.03	14.81	14.81
Djibouti					
Egypt	3.07	3.07	3.07	2.50	3.16
Iraq	32.58	24.84	24.97	24.84	24.84
Jordan	10.51	9.58	11.89	13.36	13.36
Kuwait	37.09	37.09	37.09	41.83	31.15
Lebanon	38.66	40.25	19.84	17.66	17.66
Libya	13.67	11.54	13.67	13.91	13.91
Mauritania	44.12	35.11	35.11	23.53	25.46
Morocco	22.10	11.63	11.63	11.63	11.63
Oman	33.93	33.27	27.82	17.15	17.53
Palestine	21.81	19.54	20.46	17.94	12.24
Qatar	34.20	15.17	24.52	24.77	25.01
Saudi Arabia	26.59	26.69	18.53	18.53	18.53
Somalia				11.97	15.03
Sudan	3.07	3.07	3.07	3.07	3.07
Syria	5.44	5.53	5.53	8.00	8.00
Tunisia	13.10	8.52	6.41	6.58	6.58
UAE	16.70	19.72	19.72	18.15	20.39
Yemen	11.13	11.13	11.13	11.10	

<b>Arab average</b>	21.29	18.52	17.45	16.86	17.91
---------------------	-------	-------	-------	-------	-------

Below Arab average  
 Above Arab average

Ranking for OECD mobile 40 calls prepaid basket

	2013	2015	2016	2017	2018
Algeria	4	4	5	5	19
Bahrain	10	11	11	21	20
Comoros	14	16	18	11	9
Djibouti	-	-	-	-	-
Egypt	2	2	2	1	2
Iraq	15	14	16	19	15
Jordan	5	6	8	9	7
Kuwait	18	19	20	20	18
Lebanon	19	20	13	13	12
Libya	8	8	9	10	8
Mauritania	20	18	19	17	17
Morocco	12	9	7	7	5
Oman	16	17	17	12	11
Palestine	11	12	14	14	6
Qatar	17	10	15	18	16
Saudi Arabia	13	15	10	16	13
Somalia	-	-	-	8	10
Sudan	1	1	1	2	1
Syria	3	3	3	4	4
Tunisia	7	5	4	3	3
UAE	9	13	12	15	14
Yemen	6	7	6	6	-

Least expensive  
 Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries

# 2010 OECD MOBILE BASKETS RANKING, 400 MESSAGES/MONTH



Total results for OECD mobile voice - 400 messages basket  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	34.43	34.43	34.43	40.14	40.14
Bahrain	41.68	44.41	46.68	55.32	55.32
Comoros	51.69	51.69	51.69	23.50	23.50
Djibouti					
Egypt	8.28	4.14	4.14	2.89	2.75
Iraq	45.78	31.20	31.20	44.03	49.69
Jordan	27.28	14.47	14.47	14.47	20.45
Kuwait	76.83	53.93	73.15	44.94	46.36
Lebanon	37.41	34.12	34.12	28.97	28.97
Libya	36.72	13.83	36.72	36.76	36.76
Mauritania	65.02	13.06	13.06	30.94	31.11
Morocco	50.81	16.88	13.40	13.40	13.40
Oman	32.88	27.62	27.62	27.44	23.45
Palestine	49.22	32.09	31.74	31.74	12.87
Qatar	90.84	69.71	51.82	33.61	33.61
Saudi Arabia	29.03	33.80	33.80	57.15	57.15
Somalia				3.52	3.52
Sudan	5.62	4.38	6.57	7.90	7.90
Syria	3.15	3.24	3.24	3.63	3.63
Tunisia	19.39	19.30	10.25	6.58	6.58
UAE	40.73	40.48	40.48	35.23	40.30
Yemen	20.74	20.74	20.74	11.24	

Arab average	38.38	28.18	28.97	26.35	26.87
--------------	-------	-------	-------	-------	-------

Below Arab average  
 Above Arab average

Ranking for OECD mobile 400 messages basket

	2013	2015	2016	2017	2018
Algeria	9	15	14	17	15
Bahrain	13	17	17	20	19
Comoros	17	18	18	9	10
Djibouti	-	-	-	-	-
Egypt	3	2	2	1	1
Iraq	14	11	10	18	18
Jordan	6	6	7	8	8
Kuwait	19	19	20	19	17
Lebanon	11	14	13	11	11
Libya	10	5	15	16	14
Mauritania	18	4	5	12	12
Morocco	16	7	6	7	7
Oman	8	10	9	10	9
Palestine	15	12	11	13	6
Qatar	20	20	19	14	13
Saudi Arabia	7	13	12	21	20
Somalia	-	-	-	2	2
Sudan	2	3	3	5	5
Syria	1	1	1	3	3
Tunisia	4	8	4	4	4
UAE	12	16	16	15	16
Yemen	5	9	8	6	-

Least expensive  
 Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries

# 2010 OECD MOBILE BASKETS RANKING, 30 CALLS + 100 MB/MONTH



Total results for OECD mobile voice - 30 calls + 100 MB  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	66.29	18.86	18.86	26.70	33.33
Bahrain	27.58	27.58	27.58	49.10	49.10
Comoros				14.81	14.81
Djibouti					
Egypt	6.63	5.32	5.06	5.02	4.46
Iraq	232.34	24.20	24.20	30.74	64.05
Jordan	26.04	17.18	17.18	17.18	20.45
Kuwait	46.19	80.74	69.60	44.94	51.26
Lebanon	66.53	51.55	26.33	24.03	24.03
Libya	32.95	27.14	32.77	20.63	27.14
Mauritania	156.49	145.75	145.75	23.53	25.85
Morocco	28.78	11.63	11.63	11.63	11.63
Oman	71.14	58.47	44.75	33.05	33.05
Palestine	165.07	189.00	62.11	32.19	19.77
Qatar	61.48	26.76	32.96	33.64	33.64
Saudi Arabia	38.96	43.05	38.74	24.23	24.23
Somalia					
Sudan	3.41	3.41	3.83	3.75	3.75
Syria	23.14	23.41	23.41	21.70	21.70
Tunisia	20.33	25.62	10.99	9.15	9.15
UAE	43.41	49.15	33.94	19.46	19.46
Yemen	37.18	35.79	22.76	11.24	

Arab average	60.73	45.51	34.34	22.84	25.83
--------------	-------	-------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for OECD mobile 30 calls + 100 MB

	2013	2015	2016	2017	2018
Algeria	14	5	6	14	15
Bahrain	6	11	11	20	17
Comoros	-	-	-	6	5
Djibouti	-	-	-	-	-
Egypt	2	2	2	2	2
Iraq	19	7	9	15	19
Jordan	5	4	5	7	8
Kuwait	12	17	18	19	18
Lebanon	15	15	10	12	10
Libya	8	10	12	9	13
Mauritania	17	18	19	11	12
Morocco	7	3	4	5	4
Oman	16	16	16	17	14
Palestine	18	19	17	16	7
Qatar	13	9	13	18	16
Saudi Arabia	10	13	15	13	11
Somalia	-	-	-	-	-
Sudan	1	1	1	1	1
Syria	4	6	8	10	9
Tunisia	3	8	3	3	3
UAE	11	14	14	8	6
Yemen	9	12	7	4	-

■ Least expensive  
■ Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries

# 2010 OECD MOBILE BASKETS RANKING, 100 CALLS + 500 MB/MONTH



Total results for OECD mobile voice - 100 calls + 500 MB  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	69.42	39.77	40.39	40.14	40.14
Bahrain	51.59	43.95	33.04	55.32	55.32
Comoros				24.50	24.50
Djibouti					
Egypt	12.99	10.89	11.68	7.92	4.95
Iraq	1089.92	74.38	74.38	83.53	91.61
Jordan	27.28	17.18	17.18	17.18	22.08
Kuwait	126.78	89.88	69.60	69.66	69.66
Lebanon	125.55	80.48	75.97	30.88	30.88
Libya	158.89	115.96	158.40	54.31	64.71
Mauritania	228.84	170.27	162.90	34.85	46.68
Morocco	47.92	28.34	28.78	19.41	19.71
Oman	83.90	83.90	66.81	48.69	49.33
Palestine	385.34	441.21	112.73	56.98	39.12
Qatar	96.77	72.72	64.43	34.22	34.22
Saudi Arabia	72.43	100.99	88.41	40.35	55.76
Somalia					
Sudan	10.81	10.81	10.81	10.81	10.81
Syria	123.39	124.20	124.20	129.49	129.49
Tunisia	27.26	25.62	19.22	18.56	18.56
UAE	52.49	56.27	52.49	46.34	37.70
Yemen	314.12	314.12	40.73	27.92	

Arab average	163.46	100.05	65.90	42.55	44.49
--------------	--------	--------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for OECD mobile 100 calls + 500 MB

	2013	2015	2016	2017	2018
Algeria	8	6	7	11	11
Bahrain	6	7	6	16	14
Comoros	-	-	-	6	6
Djibouti	-	-	-	-	-
Egypt	2	2	2	1	1
Iraq	19	10	13	19	18
Jordan	4	3	3	3	5
Kuwait	14	13	12	18	17
Lebanon	13	11	14	8	7
Libya	15	15	18	15	16
Mauritania	16	17	19	10	12
Morocco	5	5	5	5	4
Oman	10	12	11	14	13
Palestine	18	19	16	17	10
Qatar	11	9	10	9	8
Saudi Arabia	9	14	15	12	15
Somalia	-	-	-	-	-
Sudan	1	1	1	2	2
Syria	12	16	17	20	19
Tunisia	3	4	4	4	3
UAE	7	8	9	13	9
Yemen	17	18	8	7	-

■ Least expensive  
■ Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries

# 2010 OECD MOBILE BASKETS RANKING, 300 CALLS + 1 GB/MONTH



Total results for OECD mobile voice - 300 calls + 1 GB  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	116.00	69.60	69.60	66.29	75.68
Bahrain	110.08	55.32	52.21	55.32	55.32
Comoros				119.66	102.93
Djibouti					
Egypt	26.99	16.47	17.46	13.07	8.42
Iraq	2246.91	324.58	324.58	175.77	183.12
Jordan	35.89	19.34	19.34	18.08	23.69
Kuwait	236.76	113.73	91.13	135.94	135.94
Lebanon	206.98	185.43	185.43	131.65	131.65
Libya	348.39	256.67	346.93	121.39	123.13
Mauritania	423.97	332.94	332.94	75.62	121.91
Morocco	154.63	28.78	28.78	28.78	28.78
Oman	135.66	141.67	133.62	126.94	126.94
Palestine	601.87	689.14	218.95	93.22	96.12
Qatar	109.90	114.00	94.78	62.64	62.64
Saudi Arabia	110.49	146.54	127.96	64.50	113.35
Somalia					
Sudan	29.88	29.07	32.21	29.76	29.76
Syria	250.30	255.26	255.26	282.38	282.38
Tunisia	91.03	44.28	44.28	40.03	40.03
UAE	131.22	136.07	98.45	85.82	86.21
Yemen	647.76	647.76	84.73	78.43	

Arab average	316.56	189.82	134.66	90.26	96.21
--------------	--------	--------	--------	-------	-------

Below Arab average  
 Above Arab average

Ranking for OECD mobile 300 calls + 1 GB

	2013	2015	2016	2017	2018
Algeria	8	7	7	9	8
Bahrain	6	6	6	6	6
Comoros	-	-	-	14	11
Djibouti	-	-	-	-	-
Egypt	1	1	1	1	1
Iraq	19	16	17	19	18
Jordan	3	2	2	2	2
Kuwait	13	8	9	18	17
Lebanon	12	13	14	17	16
Libya	15	15	19	15	14
Mauritania	16	17	18	10	13
Morocco	11	3	3	3	3
Oman	10	11	13	16	15
Palestine	17	19	15	13	10
Qatar	5	9	10	7	7
Saudi Arabia	7	12	12	8	12
Somalia	-	-	-	-	-
Sudan	2	4	4	4	4
Syria	14	14	16	20	19
Tunisia	4	5	5	5	5
UAE	9	10	11	12	9
Yemen	18	18	8	11	-

Least expensive  
 Most expensive

Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries



# 2010 OECD MOBILE BASKETS RANKING, 900 CALLS + 2 GB/MONTH



Total results for OECD mobile voice - 900 calls + 2 GB  
Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	293.36	246.96	246.96	113.05	165.07
Bahrain	219.03	88.05	89.34	138.17	101.41
Comoros				395.60	389.19
Djibouti					
Egypt	54.01	40.11	40.11	28.81	16.83
Iraq	4608.22	3010.79	3010.79	373.80	385.23
Jordan	182.91	24.01	24.01	28.62	28.42
Kuwait	387.74	136.07	109.11	224.70	287.62
Lebanon	594.21	450.64	450.64	411.36	411.36
Libya	775.36	587.77	770.55	302.13	300.40
Mauritania	1020.55	708.64	708.64	707.59	696.02
Morocco	333.37	57.84	57.84	57.84	57.84
Oman	227.52	242.05	242.05	242.05	242.05
Palestine	1143.33	1309.11	538.42	250.75	287.11
Qatar	206.67	147.62	147.62	89.39	89.39
Saudi Arabia	202.62	221.89	222.49	221.35	229.85
Somalia					
Sudan	93.48	70.33	75.39	87.73	58.74
Syria	510.45	521.82	521.82	586.83	586.83
Tunisia	251.00	128.11	79.26	83.63	83.63
UAE	262.45	313.79	236.37	176.53	179.49
Yemen	1357.41	1357.41	208.79	199.80	

<b>Arab average</b>	669.67	508.58	409.48	235.99	241.92
---------------------	--------	--------	--------	--------	--------

Below Arab average  
 Above Arab average

Ranking for OECD mobile 900 calls + 2 GB

	2013	2015	2016	2017	2018
Algeria	10	11	13	7	8
Bahrain	6	5	6	8	7
Comoros	-	-	-	17	16
Djibouti	-	-	-	-	-
Egypt	1	2	2	2	1
Iraq	19	19	19	16	15
Jordan	3	1	1	1	2
Kuwait	12	7	7	12	13
Lebanon	14	13	14	18	17
Libya	15	15	18	15	14
Mauritania	16	16	17	20	19
Morocco	11	3	3	3	3
Oman	7	10	12	13	11
Palestine	17	17	16	14	12
Qatar	5	8	8	6	6
Saudi Arabia	4	9	10	11	10
Somalia	-	-	-	-	-
Sudan	2	4	4	5	4
Syria	13	14	15	19	18
Tunisia	8	6	5	4	5
UAE	9	12	11	9	9
Yemen	18	18	9	10	-

Least expensive  
 Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries

# 2010 OECD MOBILE BASKETS RANKING, 100 CALLS + 2 GB/MONTH



Total results for OECD mobile voice - 100 calls + 2 GB

Results in USD/PPP including VAT

	2013	2015	2016	2017	2018
Algeria	69.42	40.39	40.39	53.40	40.14
Bahrain	89.78	46.44	38.50	55.32	55.32
Comoros				32.58	32.58
Djibouti					
Egypt	18.39	17.82	16.39	13.86	10.89
Iraq	4100.94	2033.55	2033.55	129.51	134.09
Jordan	118.25	18.08	18.08	18.08	23.69
Kuwait	126.78	89.88	69.60	69.66	69.66
Lebanon	182.85	108.97	112.25	30.88	30.88
Libya	549.23	376.19	548.74	80.33	78.59
Mauritania	228.84	170.27	162.90	127.90	46.68
Morocco	106.34	29.07	29.07	19.41	19.71
Oman	134.01	107.66	122.02	62.05	60.13
Palestine	893.51	1023.07	167.81	167.81	167.81
Qatar	126.29	102.24	99.86	75.55	75.55
Saudi Arabia	72.43	120.85	109.72	40.35	77.53
Somalia					
Sudan	20.23	15.93	17.77	20.23	20.23
Syria	464.01	464.82	464.82	477.85	477.85
Tunisia	32.38	64.05	64.05	43.47	43.47
UAE	121.61	113.81	52.49	53.29	37.70
Yemen	1169.23	1169.23	45.18	77.85	

<b>Arab average</b>	453.92	321.70	221.75	82.47	79.08
---------------------	--------	--------	--------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for OECD mobile 100 calls + 2 GB

	2013	2015	2016	2017	2018
Algeria	4	5	6	10	8
Bahrain	6	6	5	11	11
Comoros	-	-	-	6	6
Djibouti	-	-	-	-	-
Egypt	1	2	1	1	1
Iraq	19	19	19	18	17
Jordan	8	3	3	2	4
Kuwait	11	8	10	13	13
Lebanon	13	11	13	5	5
Libya	16	15	18	16	16
Mauritania	14	14	15	17	10
Morocco	7	4	4	3	2
Oman	12	10	14	12	12
Palestine	17	17	16	19	18
Qatar	10	9	11	14	14
Saudi Arabia	5	13	12	7	15
Somalia	-	-	-	-	-
Sudan	2	1	2	4	3
Syria	15	16	17	20	19
Tunisia	3	7	9	8	9
UAE	9	12	8	9	7
Yemen	18	18	7	15	-

■ Least expensive  
■ Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries



# OBSERVATIONS FROM MOBILE TIME SERIES RESULTS

- There has been a mix of decreases and increases over the period 2017 to 2018, presenting a much more stable picture than that of the 2017 report, which saw much greater declines. In part this is due to the relatively short time between this and the previous report, but also, it reflects a period of consolidation for some providers, at least, after the large reductions seen between 2016 and 2017.
- Some of the changes that were observed included the following:
  - ATM Mobilis in Algeria introduced a new range of prepaid plans, PixX, replacing its previously offered el Khedra , Awel and Mobtasim tariffs, among others
  - Viva in Bahrain introduced a new mobile option for unlimited on-net calls and SMSs, which reduced the cost of some baskets.
  - Both Vodafone Egypt and Orange , Egypt made general portfolio changes
  - Orange, Jordan revised its offering, resulting in general increases across the baskets.
- Many operators across the Arab countries have made at least some changes to their mobile tariff offerings since 2017, although there are also a number of providers that have made limited, if any change.
  - The average number of offerings per provider has decreased slightly, from 26 to 24.
- Prepaid plans account for just under half of all plans, while a similar number of are voice and data plans. This is not a significant change since last year.





# LEASED LINE BASKET RESULTS 2018



# OECD LEASED LINE BASKET, 2010 DEFINITIONS

- Prices for 2 Mb/s and 34 Mb/s national circuits
- 6 specific distances are used:
  - 2 km, 20 km, 50 km, 100 km, 200 km and 500 km
- Each distance is weighted in order to calculate a **weighted average price for one circuit** as follows:

National Distance	2km	20km	50km	100km	200km	500km	Total
64 kb/s	50%	18%	6%	8%	10%	8%	100%
2 Mb/s	50%	18%	6%	8%	10%	8%	100%
34 Mb/s	42%	18%	15%	9%	8%	8%	100%

- The 2 bitrates are calculated and reported separately.
- Where the distances in the basket go beyond the country borders, the weights of those distances are attributed to the longest available tariff zone.
  - For example: In Bahrain a 2 Mb/s circuit costs BD 890 regardless of distance. The longest possible circuit distance in Bahrain is approximately 50 km. But the weights for 100 km (8%), 200 km (10%) and 500 km (8%) are still applied to this price as the price for the longest possible circuit in order to cover 100%.
  - This may bias the results for small countries with distance-sensitive prices in the sense that a relatively higher proportion of the circuits will be at maximum cost
  - Small countries with no distance pricing will be favoured by this scheme.
- For the Arab country price benchmarking three more bitrates are added, to the extent they are offered in the countries concerned:
  - 64 kb/s (formerly used in the OECD 2006 baskets) and 256 kb/s in order to cover a wider range of services relevant for the region, and 155 Mb/s to show the potential for future development.
    - The calculations for these speeds use the same weighted average price as for 2 Mb/s and 34 Mb/s respectively



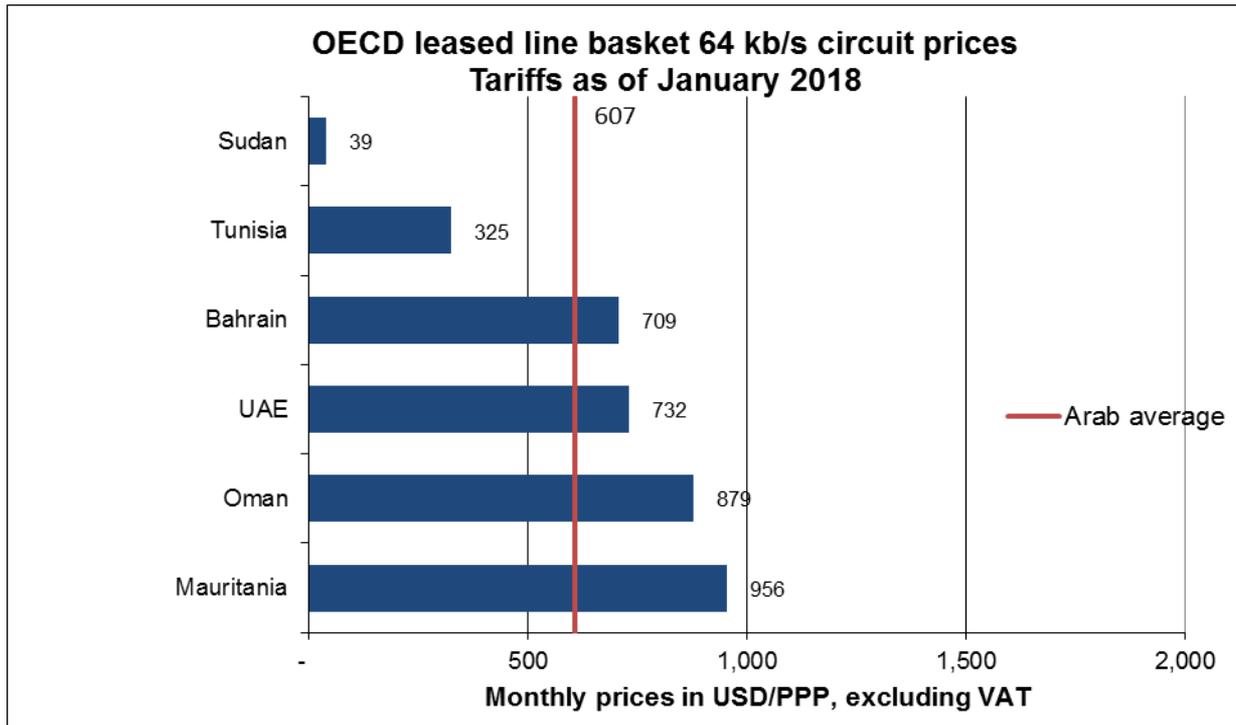


## LEASED LINE DATA ISSUES

- No price data available for:
  - Comoros
  - Djibouti
  - Egypt
  - Iraq
  - Jordan
  - Libya
  - Morocco
  - Palestine
  - Qatar
  - Saudi Arabia
  - Somalia
  - Syria
  - Yemen
- Other countries may have data missing for specific bitrates



# 64 KB/S OECD LEASED LINE BASKET RESULTS

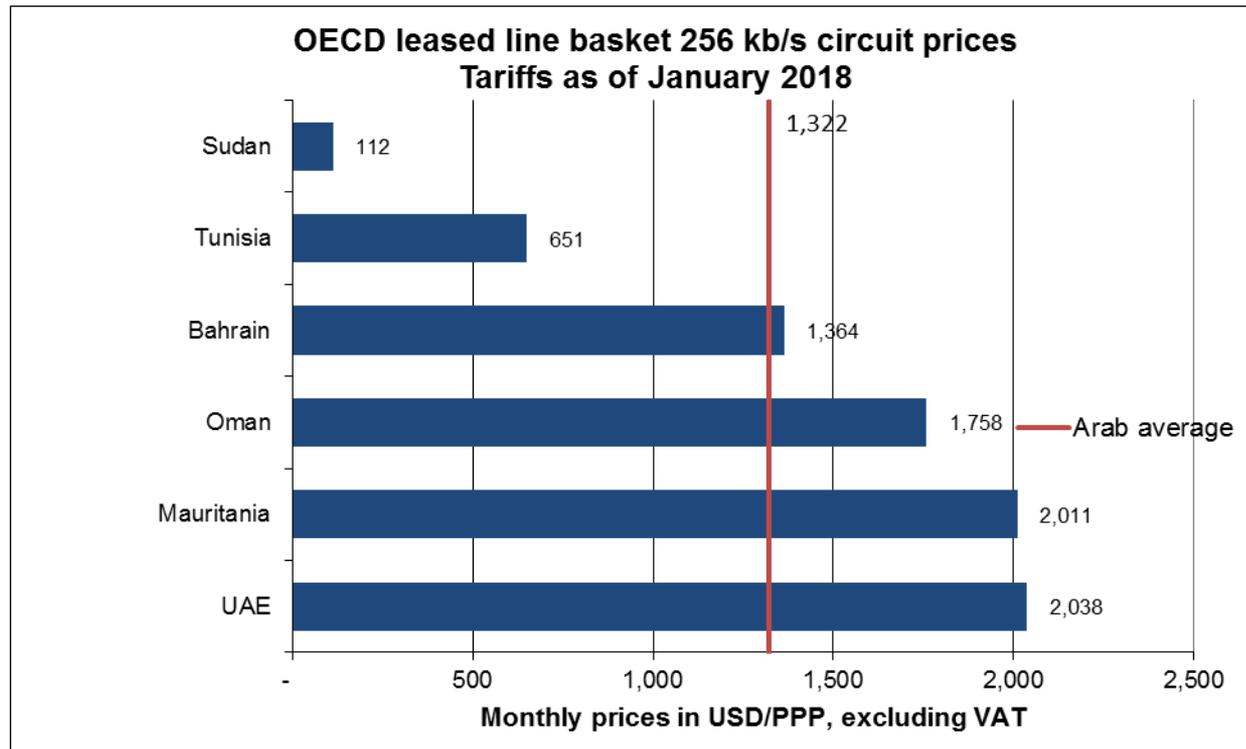


The 64 kb/s basket is no longer covered within the OECD baskets, however the standard 2010 methodology has been applied to 64 kb/s circuits for the Arab countries

Note: No equivalent OECD data exists.



# 256KB/S OECD LEASED LINE BASKET RESULTS



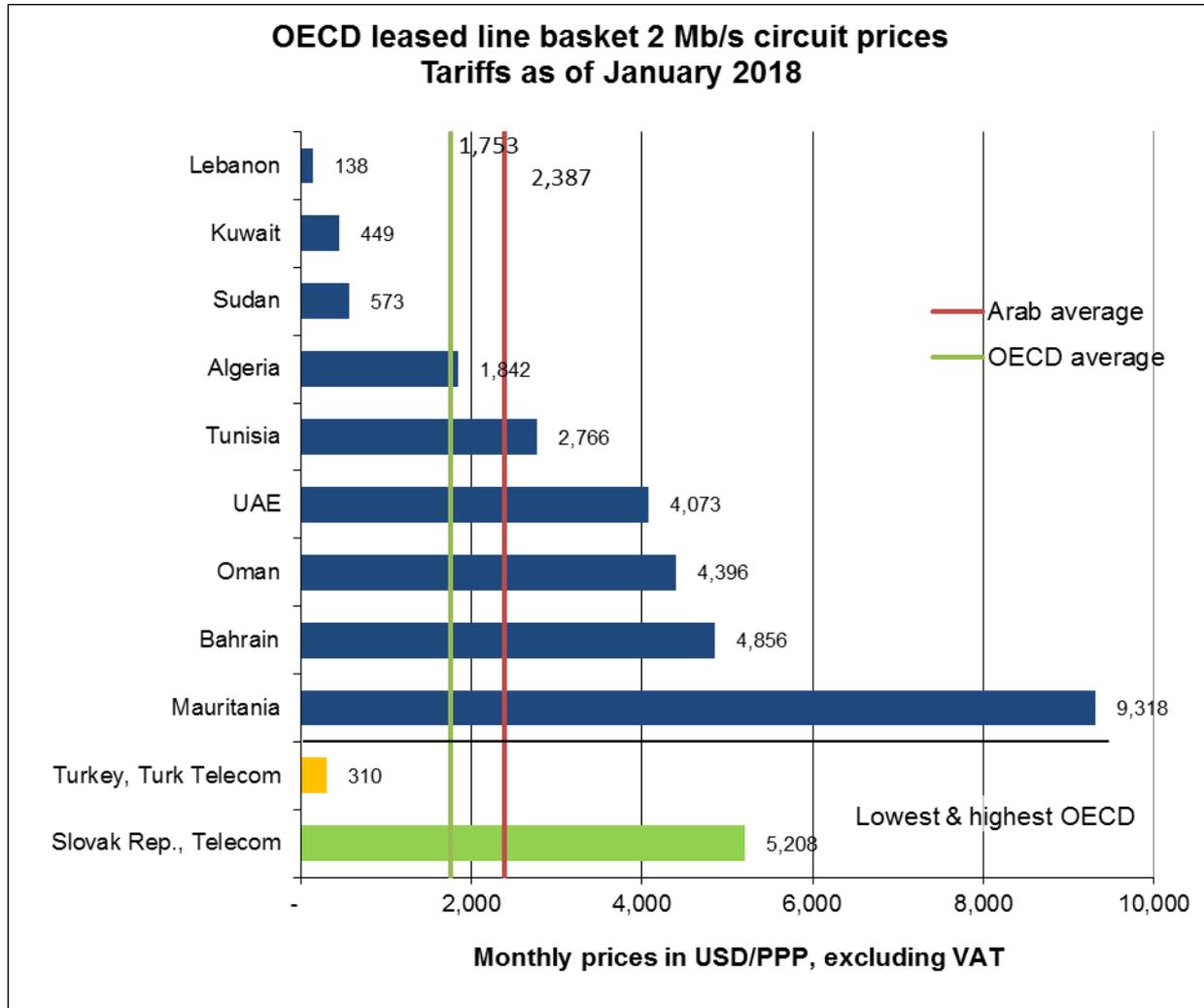
The OECD basket does not cover 256 kb/s, however the standard 2010 methodology has been applied to 256 kb/s circuits for the Arab countries

Note: No equivalent OECD data exists.





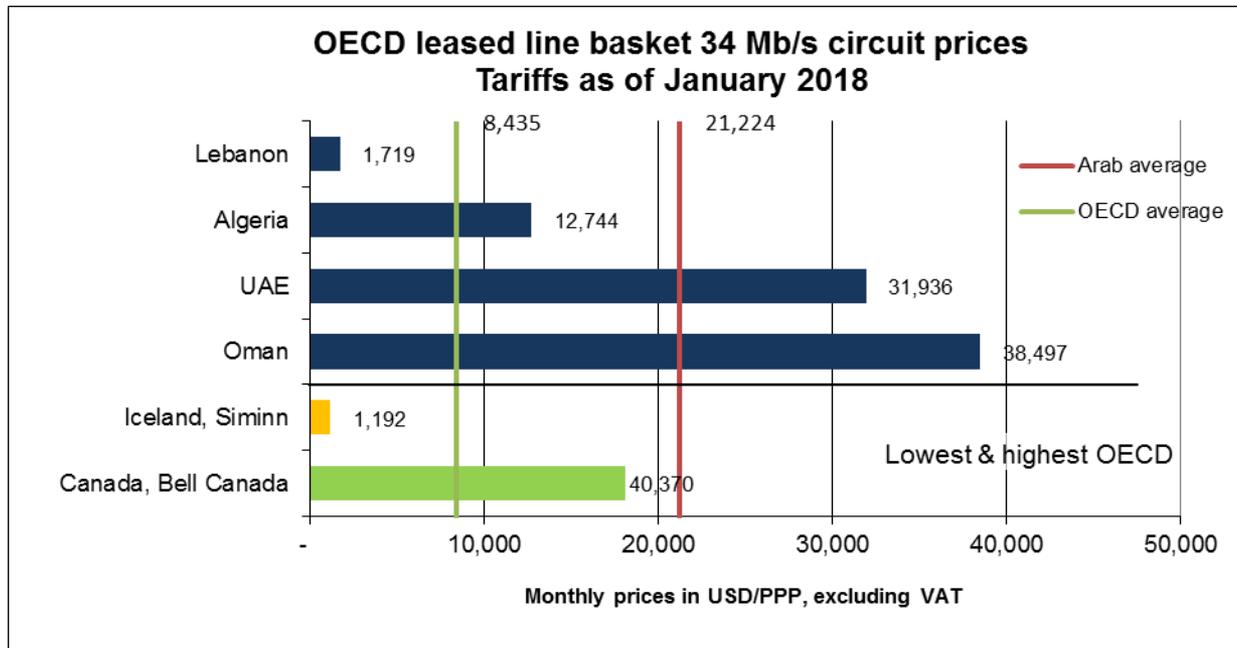
# 2 MB/S OECD LEASED LINE BASKET RESULTS



The OECD data shown represents the lowest and highest prices found in OECD countries, and the average price across the 19 OECD countries where data is available.



# 34 MB/S OECD LEASED LINE BASKET RESULTS



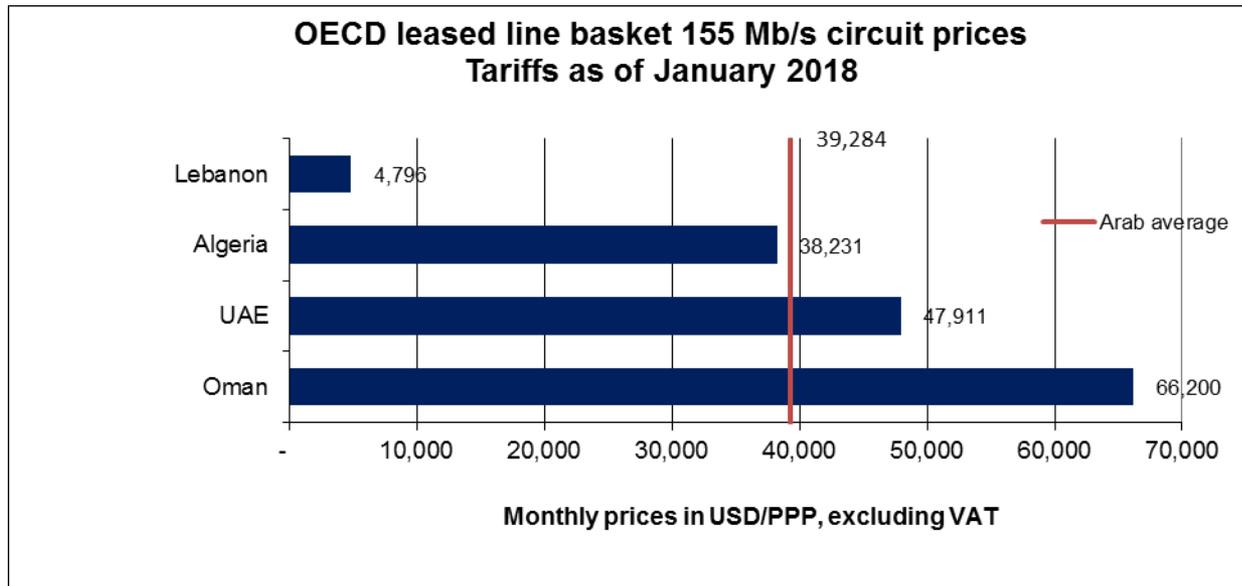
The OECD data shown represents the lowest and highest prices found in OECD countries, and the average price across the 12 OECD countries where data is available.

Only a few of the Arab countries publish these prices. The service may still be offered, though.





# 155 MB/S OECD LEASED LINE BASKET RESULTS



Only a few of the Arab countries publish these prices. The service may still be offered, though.

The OECD basket does not cover 155 Mb/s, however the standard 2010 methodology has been applied to 155 Mb/s circuits for the Arab countries

Note: No equivalent OECD data exists.





# OBSERVATIONS FROM LEASED LINE RESULTS

- The table below shows a summary of the cheapest and most expensive countries for each basket.

	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd
64 kb/s	Sudan	Tunisia	Bahrain	Mauritania	Oman	UAE
256 kb/s	Sudan	Tunisia	Bahrain	UAE	Mauritania	Oman
2 Mb/s	Lebanon	Kuwait	Sudan	Mauritania	Bahrain	Oman
34 Mb/s*	Lebanon	Algeria	UAE	Oman		
155 Mb/s*	Lebanon	Algeria	UAE	Oman		

\* Offers only available from 4 countries

- For leased lines up to 256 kb/s, Sudan, Tunisia and Bahrain have the lowest prices
- For 2 Mb/, Lebanon is the cheapest, followed by Kuwait and Sudan
- Lebanon again has the cheapest offers for 34 Mb/s and 155 Mb/s, followed by Algeria and UAE
  - The number of operators publishing prices at this level There are no offers from any other countries for these speeds
- The number of Arab countries publishing leased line is low:
  - Only 6 of the 22 countries publish prices for 64 kb/s and 256 kb/s circuits, 9 countries for 2 Mb/s, and 4 countries for 34 Mb/s and 155 Mb/s.
  - This trend is also one that has been observed in OECD countries
- For 2 Mb/s, Lebanon, Kuwait and Sudan have prices below the OECD average, while Algeria is on par with the OECD average.
- For 34 Mb/s, only Lebanon is below the OECD average..
- Many of the Arab countries are quite small in size and this price comparison may give advantage to the tariff structure used in these small countries.
  - i.e. the reality may be worse than the result shown here.





# LEASED LINE TIME SERIES ANALYSIS AND RANKING TABLES 2013-2018

# 2010 OECD LEASED LINE BASKETS RANKING, 64 KB/S



Total results for OECD 64 kb/s leased line basket  
Results in US\$PPP excluding VAT

	2013	2015	2016	2017	2018
Algeria	290				
Bahrain	709	709	709	709	709
Comoros					
Djibouti	1,619	1,619	1,619		
Egypt	78	78	78		
Iraq					
Jordan	456	456	456		
Kuwait					
Lebanon	307	307	307	266	
Libya	241	241	241		
Mauritania	1,378	1,378	1,378	956	956
Morocco	946	946	946		
Oman	879	879	879	879	879
Palestine	331	331	331		
Qatar	905	905	905		
Saudi Arabia	895	895	895		
Somalia					
Sudan				39	39
Syria	16	16	16		
Tunisia	325	325	325	325	325
UAE	765	1,475	1,475	732	732
Yemen	634	634	634		

<b>Arab average</b>	634	700	700	558	607
---------------------	-----	-----	-----	-----	-----

<span style="color: green;">■</span> Below Arab average	0.00%	-20.22%	8.73%
<span style="color: red;">■</span> Above Arab average			

Ranking for OECD 64 kb/s leased line basket

	2013	2015	2016	2017	2018
Algeria	4	-	-	-	-
Bahrain	10	9	9	4	3
Comoros	-	-	-	-	-
Djibouti	17	16	16	-	-
Egypt	2	2	2	-	-
Iraq	-	-	-	-	-
Jordan	8	7	7	-	-
Kuwait	-	-	-	-	-
Lebanon	5	4	4	2	-
Libya	3	3	3	-	-
Mauritania	16	14	14	7	6
Morocco	15	13	13	-	-
Oman	12	10	10	6	5
Palestine	7	6	6	-	-
Qatar	14	12	12	-	-
Saudi Arabia	13	11	11	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	1	1
Syria	1	1	1	-	-
Tunisia	6	5	5	3	2
UAE	11	15	15	5	4
Yemen	9	8	8	-	-

■ Least expensive  
■ Most expensive



# 2010 OECD LEASED LINE BASKETS RANKING, 256 KB/S



Total results for OECD 256 kb/s leased line basket  
Results in US\$PPP excluding VAT

	2013	2015	2016	2017	2018
Algeria	677				
Bahrain	1,364	1,364	1,364	1,364	1,364
Comoros					
Djibouti	2,323	2,323	2,323		
Egypt	202	202	202		
Iraq					
Jordan	1,000	1,000	1,000		
Kuwait					
Lebanon	307	307	307	266	
Libya	842	842	842		
Mauritania	2,050	2,050	2,050	2,011	2,011
Morocco	1,912	1,912	1,912		
Oman	1,758	1,758	1,758	1,758	1,758
Palestine	590	590	590		
Qatar	1,644	1,644	1,644		
Saudi Arabia	2,825	2,825	2,825		
Somalia					
Sudan				112	112
Syria	52	52	52		
Tunisia	651	651	651	651	651
UAE	2,143	3,878	3,878	2,038	2,038
Yemen	1,060	1,060	1,060		

<b>Arab average</b>	1,259	1,404	1,404	1,171	1,322
---------------------	-------	-------	-------	-------	-------

Below Arab average  
 Above Arab average

Ranking for OECD 256 kb/s leased line basket

	2013	2015	2016	2017	2018
Algeria	6	-	-	-	-
Bahrain	10	9	9	4	3
Comoros	-	-	-	-	-
Djibouti	16	14	14	-	-
Egypt	2	2	2	-	-
Iraq	-	-	-	-	-
Jordan	8	7	7	-	-
Kuwait	-	-	-	-	-
Lebanon	3	3	3	2	-
Libya	7	6	6	-	-
Mauritania	14	13	13	6	5
Morocco	13	12	12	-	-
Oman	12	11	11	5	4
Palestine	4	4	4	-	-
Qatar	11	10	10	-	-
Saudi Arabia	17	15	15	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	1	1
Syria	1	1	1	-	-
Tunisia	5	5	5	3	2
UAE	15	16	16	7	6
Yemen	9	8	8	-	-

Least expensive  
 Most expensive



# 2010 OECD LEASED LINE BASKETS RANKING, 2 MB/S



Total results for OECD 2 Mb/s leased line basket  
Results in US\$PPP excluding VAT

	2013	2015	2016	2017	2018
Algeria	2,278	2,278	2,278	2,278	1,842
Bahrain	4,856	4,856	4,856	4,856	4,856
Comoros					
Djibouti	4,333	4,333	4,333		
Egypt	466	466	466		
Iraq					
Jordan	5,111	5,111	5,111		
Kuwait					449
Lebanon	614	614	614	571	138
Libya	1,423	1,423	1,423		
Mauritania				9,318	9,318
Morocco	4,679	4,679	4,679		
Oman	4,396	4,396	4,396	4,396	4,396
Palestine	2,697	2,697	2,697		
Qatar	4,672	4,672	4,672		
Saudi Arabia	4,665	4,665	4,665		
Somalia					
Sudan	10,865	10,865	10,865	573	573
Syria	302	302	302		
Tunisia	2,766	2,766	2,766	2,766	2,766
UAE	4,500	6,344	6,344	4,073	4,073
Yemen	4,998	4,998	4,998		

Arab average	3,742	3,851	3,851	3,604	3,157
--------------	-------	-------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for OECD 2 Mb/s leased line basket

	2013	2015	2016	2017	2018
Algeria	5	5	5	3	4
Bahrain	14	13	13	7	8
Comoros	-	-	-	-	-
Djibouti	8	8	8	-	-
Egypt	2	2	2	-	-
Iraq	-	-	-	-	-
Jordan	16	15	15	-	-
Kuwait	-	-	-	-	2
Lebanon	3	3	3	1	1
Libya	4	4	4	-	-
Mauritania	-	-	-	8	9
Morocco	13	12	12	-	-
Oman	9	9	9	6	7
Palestine	6	6	6	-	-
Qatar	12	11	11	-	-
Saudi Arabia	11	10	10	-	-
Somalia	-	-	-	-	-
Sudan	17	17	17	2	3
Syria	1	1	1	-	-
Tunisia	7	7	7	4	5
UAE	10	16	16	5	6
Yemen	15	14	14	-	-

■ Least expensive  
■ Most expensive



# 2010 OECD LEASED LINE BASKETS RANKING, 34 MB/S



Total results for OECD 34 Mb/s leased line basket  
Results in US\$PPP excluding VAT

	2013	2015	2016	2017	2018
Algeria		20,655	20,655	20,655	12,744
Bahrain					
Comoros					
Djibouti					
Egypt	3,104	3,104	3,104		
Iraq					
Jordan					
Kuwait					
Lebanon					1,719
Libya					
Mauritania					
Morocco	48,229	48,229	19,238		
Oman	38,497	38,497	38,497	38,497	38,497
Palestine					
Qatar	12,083	12,083	12,083		
Saudi Arabia	28,650	28,650	28,650		
Somalia					
Sudan					
Syria					
Tunisia					
UAE		45,441	45,441	31,936	31,936
Yemen	62,508	62,508	62,508		

<b>Arab average</b>	32,178	32,396	28,772	30,363	21,224
---------------------	--------	--------	--------	--------	--------

Below Arab average  
 Above Arab average

Ranking for OECD 34 Mb/s leased line basket

	2013	2015	2016	2017	2018
Algeria	-	3	4	1	2
Bahrain	-	-	-	-	-
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	1	1	1	-	-
Iraq	-	-	-	-	-
Jordan	-	-	-	-	-
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	1
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	5	7	3	-	-
Oman	4	5	6	3	4
Palestine	-	-	-	-	-
Qatar	2	2	2	-	-
Saudi Arabia	3	4	5	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	-	6	7	2	3
Yemen	6	8	8	-	-

Least expensive  
 Most expensive



# 2010 OECD LEASED LINE BASKETS RANKING, 155 MB/S



Total results for OECD 155 Mb/s leased line basket  
Results in US\$PPP excluding VAT

	2013	2015	2016	2017	2018
Algeria		37,072	37,072	37,072	38,231
Bahrain					
Comoros					
Djibouti					
Egypt	6,208	6,208	6,208		
Iraq					
Jordan					
Kuwait					
Lebanon					4,796
Libya					
Mauritania					
Morocco					
Oman	66,200	66,200	66,200	66,200	66,200
Palestine					
Qatar	44,018	44,018	44,018		
Saudi Arabia	58,523	58,523	58,523		
Somalia					
Sudan					
Syria					
Tunisia					
UAE		68,169	68,169	47,911	47,911
Yemen					

<b>Arab average</b>	43,737	46,698	46,698	50,394	39,284
---------------------	--------	--------	--------	--------	--------

Below Arab average  
 Above Arab average

Ranking for OECD 155 Mb/s leased line basket

	2013	2015	2016	2017	2018
Algeria	-	2	2	1	2
Bahrain	-	-	-	-	-
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	1	1	1	-	-
Iraq	-	-	-	-	-
Jordan	-	-	-	-	-
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	1
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	-	-
Oman	4	5	5	3	4
Palestine	-	-	-	-	-
Qatar	2	3	3	-	-
Saudi Arabia	3	4	4	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	-	6	6	2	3
Yemen	-	-	-	-	-

Least expensive  
 Most expensive





# OBSERVATIONS FROM LEASED LINE TIME SERIES RESULTS

- Leased line prices have been generally stable since 2012, with no change to most of the operator prices.
  - Lebanon stopped publishing prices for 64 Kb/s and 256 Kb/s circuits, but now publishes 34 Mb/s and 155 Mb/s pricing
  - Kuwait now has published offers for 2 Mb/s circuits
- For those countries that have published prices, there were some price changes
  - For 2 Mb/s: Algeria and Lebanon reduced prices;
  - For 34 Mb/s Algeria again reduced prices, while Lebanon featured in the results for the first time.
  - For 155 Mb/s, Algeria increased prices, while Lebanon featured in the results for the first time.
- The cumulative effect of the reductions in some countries, and the removal of results for other countries, due to lack of published prices is an increase in the average cost for 64 Kb/s and 256 Kb/s circuits, and a corresponding decrease for 2 Mb/s, 34 Mb/s and 155 Mb/s circuits.
- The average price changes for each basket between 2016/2017 and 2017/2018 are shown in the table below

	2016-2017	2017-2018
64 kb/s	-20.22%	8.73%
256 kb/s	-16.55%	12.88%
2 Mb/s	-6.41%	-12.40%
34 Mb/s*	5.53%	-30.10%
155 Mb/s*	7.91%	-22.05%

Percentage change 2016/7 and 2017/18





# FIXED BROADBAND BASKET RESULTS 2018



# FIXED BROADBAND BASKET METHODOLOGY

- Research covering 354 fixed broadband service offerings from the incumbent ISP\* in 19 Arab countries
- Costs are derived using the OECD broadband basket methodology, and are based on the baskets that were defined by OECD in 2014, which consider a number of speed ranges and usage levels (18 in total). The baskets are shown in the table below. As most ISPs in the Arab countries do not offer services in the highest speed category (greyed out in the table), results for these have not been included.
  - As of January 2016, only two of the Arab countries had broadband services >1000 Mb/s; Qatar and UAE. The availability of very high speed services at 1G/s and above also has limited availability across the OECD countries.
  - Costs are shown separately for both residential and business services
- Total monthly cost calculated based on usage profiles, which are dependent on the speed of service, as shown below (15 of the total 18) :

Service speeds		Usage volume (GB/month)		
Download speed (Mb/s)	Minimum upload speed (Mb/s)	Low	Medium	High
≤ 1.5/2.0	0.256	5	10	20
> 1.5/2.0 - 10	0.512	5	15	50
> 10 - 25/30	0.768	10	25	100
> 25/30 - 100	1	15	50	200
> 100 - 1000	3	25	100	400
> 1000	10	100	250	1000

The OECD data shown refer to the incumbent ISP\* fixed broadband services in the 35 OECD countries

- Tariff data cover the cheapest form of installation, amortized over three years, modem cost (if applicable), monthly rental, usage allowances and any usage charges. Additional information on speed, web-space, email addresses, penalties with excess usage, and contract term duration is also included in the basic data and presented along with the cost results.
  - To the extent this information is published by the provider

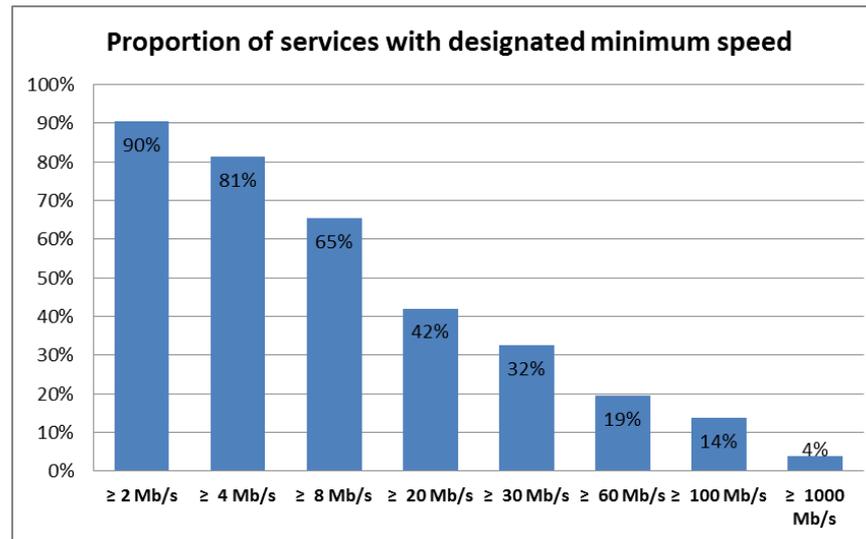
\* **Incumbent ISP will normally mean the ISP owned by the incumbent operator in the country.**





# FIXED BROADBAND DATA ISSUES

- Price data is not available for broadband services in Iraq and Somalia
- Speeds have continued to increase, with no ISPs having offerings below 256 kb/s. Maximum speeds have increased dramatically. As shown in the table below, 90% of services have a minimum advertised download speed of 2 Mb/s or above, and 42% are at speeds of at least 20 Mb/s.



- Speeds above 2 Mb/s are available in 18 of the 19 countries. Only Libya has broadband speeds not exceeding 2 Mb/s (only 512kb/s is available. This is the same as the situation in 2017)
- Average speed across the Arab countries continues to rise - up from 40 Mb/s in 2017 to 45.2 Mb/s in 2018

**Note: the average speed is a simple average across the packages, and does not take into account the distribution of customers across available plans. Information on customer distribution is not available, and hence a weighted average is not possible.**

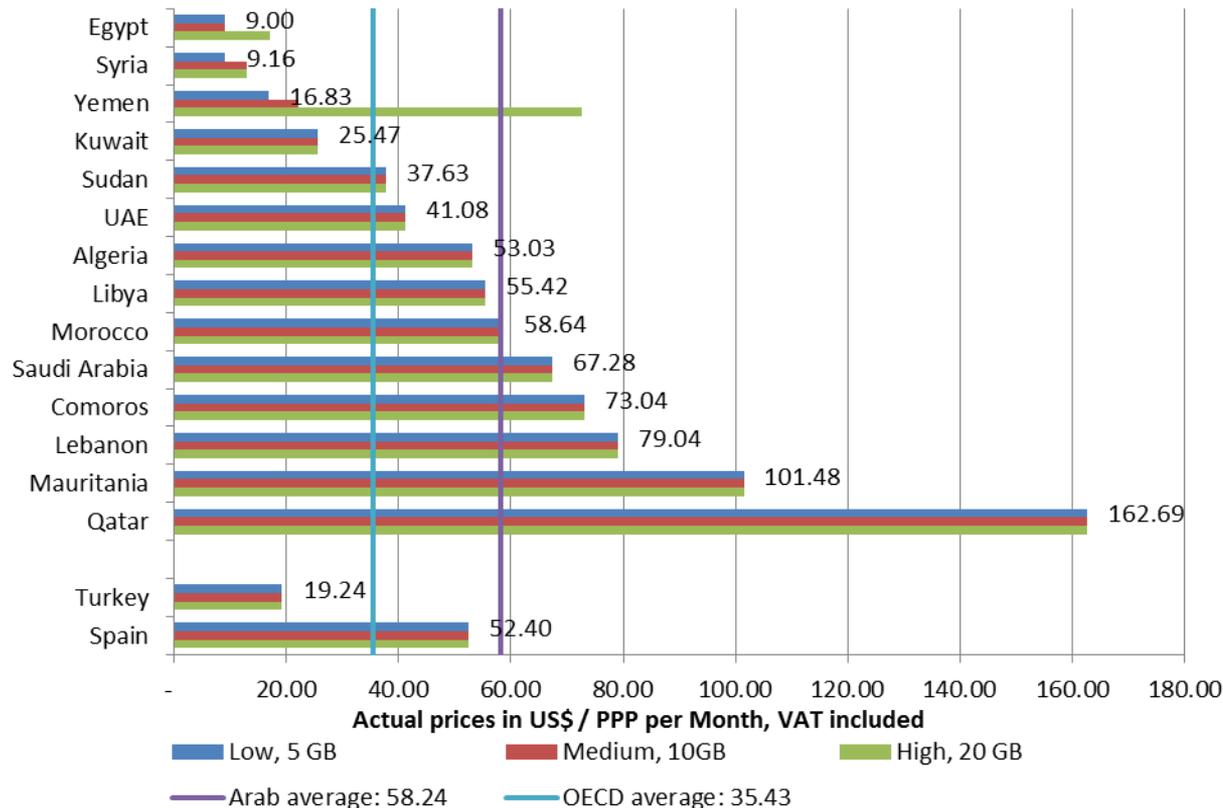


# RESIDENTIAL FIXED BROADBAND VERY LOW SPEED OECD 2014 BASKET > 256 KB/S UP TO 2 MB/S



## Residential Fixed Broadband, 0.25 - 2 Mb/s

Data as of January 2018



Total monthly cost calculated based on three usage baskets:

Low usage: 5 GB  
 Medium usage: 10 GB  
 High usage: 20 GB.

Average lines are based on average across the overall results for the 3 usage levels.

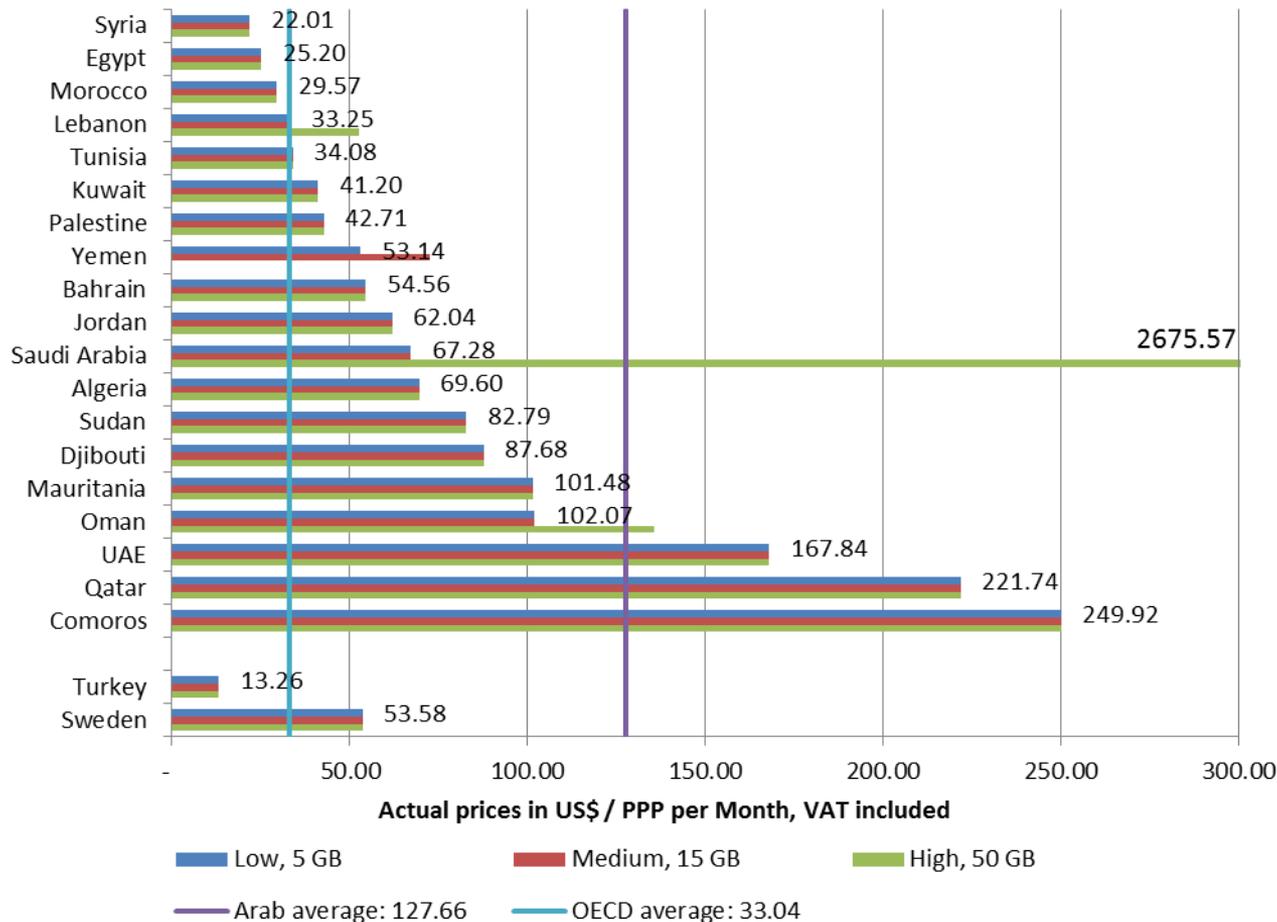


# RESIDENTIAL FIXED BROADBAND LOW SPEED OECD 2014 BASKET > 2 MB/S UP TO 10 MB/S



## Residential Fixed Broadband, 2 - 10 Mb/s

Data as of January 2018



Total monthly cost calculated based on three usage baskets:

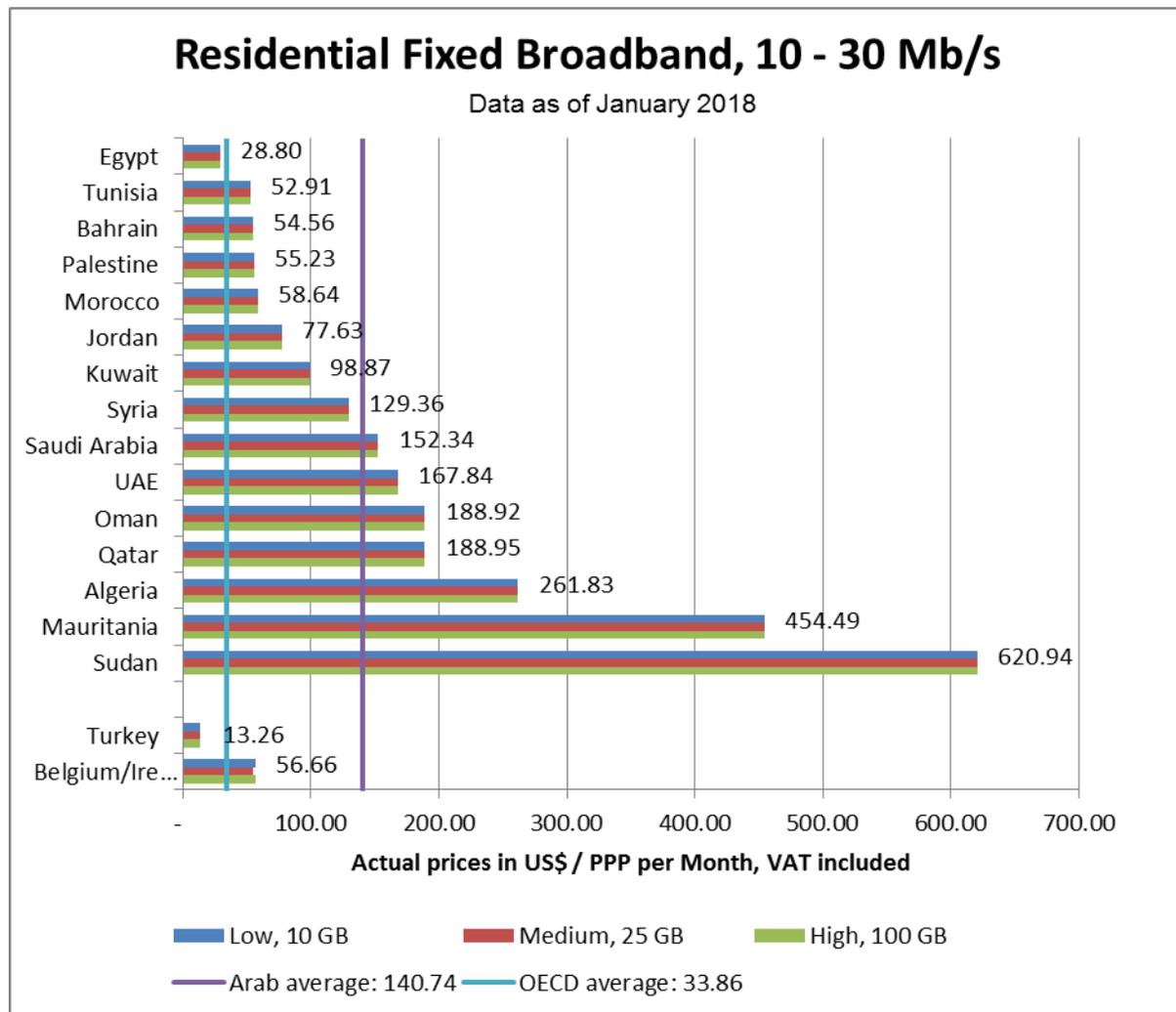
Low usage: 5 GB  
Medium usage: 15 GB  
High usage: 50 GB.

Average lines are based on average across the overall results for the 3 usage levels.

Note the high cost for Saudi Arabia for high usage. This is due to tariff changes in this speed range, with the only offer available now being a basic internet service not suited for high usage. Higher speed services in Saudi Arabia are more cost effective, but do not fit the profile of this basket.



# RESIDENTIAL FIXED BROADBAND MEDIUM SPEED OECD 2014 BASKET > 10 MB/S UP TO 30 MB/S



Total monthly cost calculated based on three usage baskets:

Low usage: 10 GB  
 Medium usage: 25 GB  
 High usage: 100 GB.

Average lines are based on average across the overall results for the 3 usage levels.

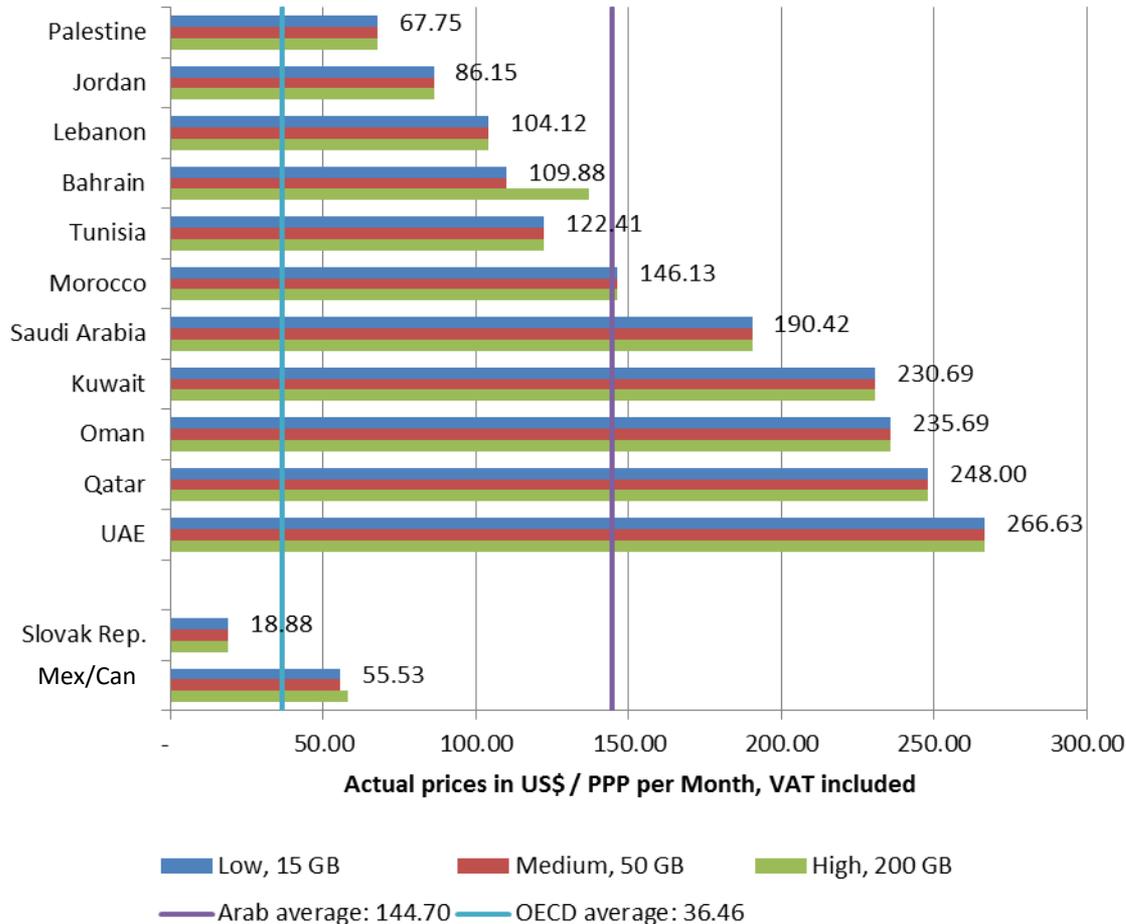


# RESIDENTIAL FIXED BROADBAND HIGH SPEED OECD 2014 BASKET > 30 MB/S UP TO 100 MB/S



## Residential Fixed Broadband, 30 - 100 Mb/s

Data as of January 2018



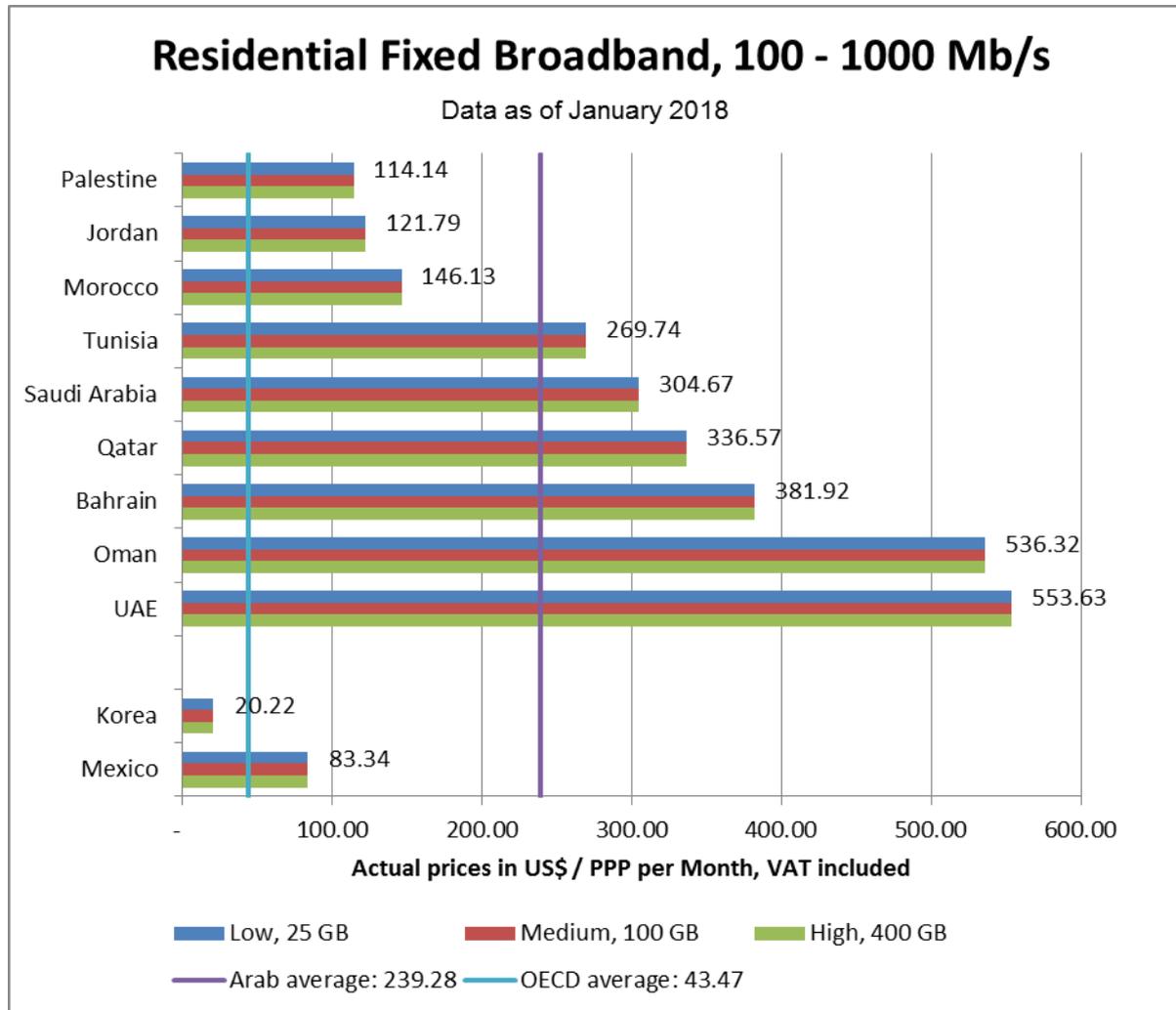
Total monthly cost calculated based on three usage baskets:

Low usage: 15 GB  
 Medium usage: 50 GB  
 High usage: 200 GB.

Average lines are based on average across the overall results for the 3 usage levels.



# RESIDENTIAL FIXED BROADBAND HIGH SPEED OECD 2014 BASKET > 100 MB/S UP TO 1000 MB/S



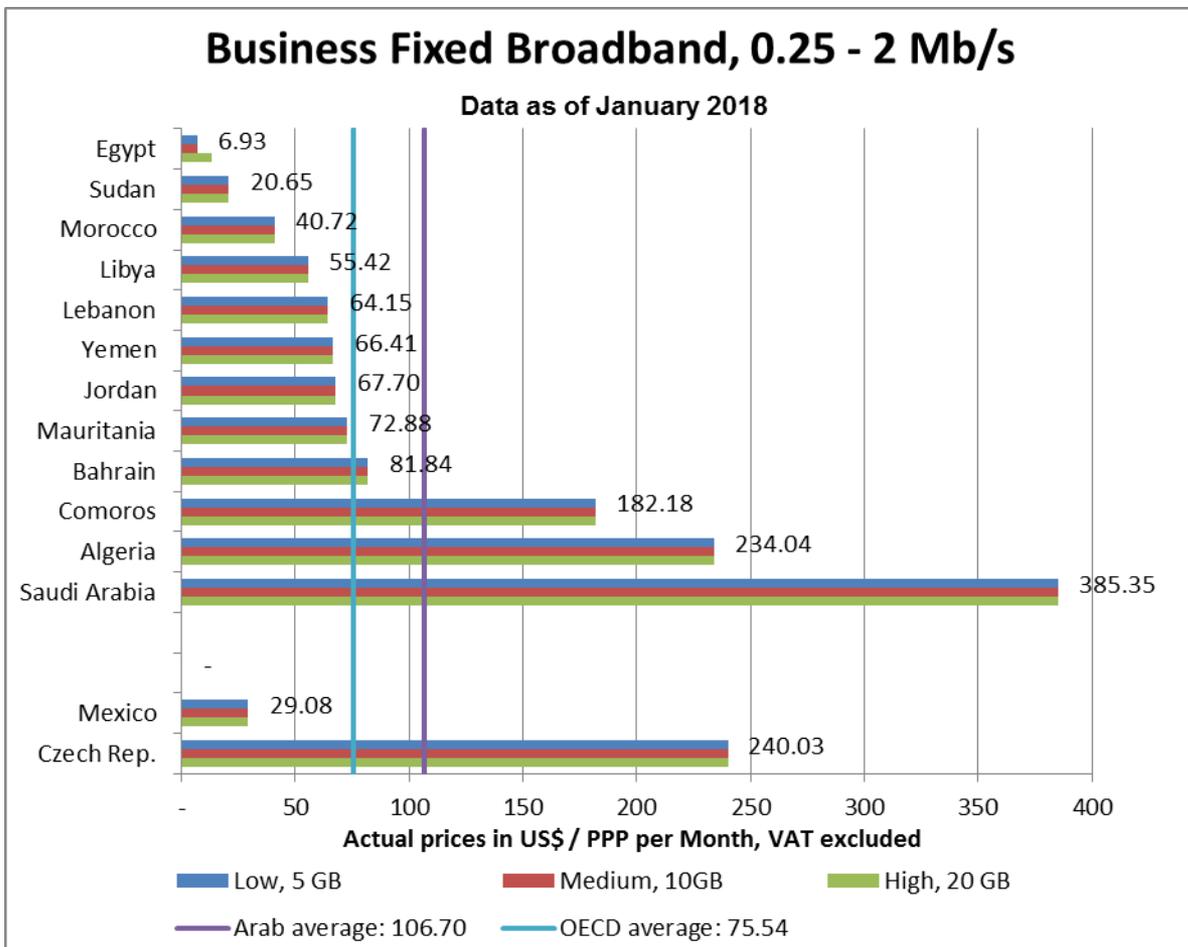
Total monthly cost calculated based on three usage baskets:

Low usage: 25 GB  
 Medium usage: 100 GB  
 High usage: 400 GB.

Average lines are based on average across the overall results for the 3 usage levels.



# BUSINESS FIXED BROADBAND VERY LOW SPEED OECD 2014 BASKET > 256 KB/S UP TO 2 MB/S



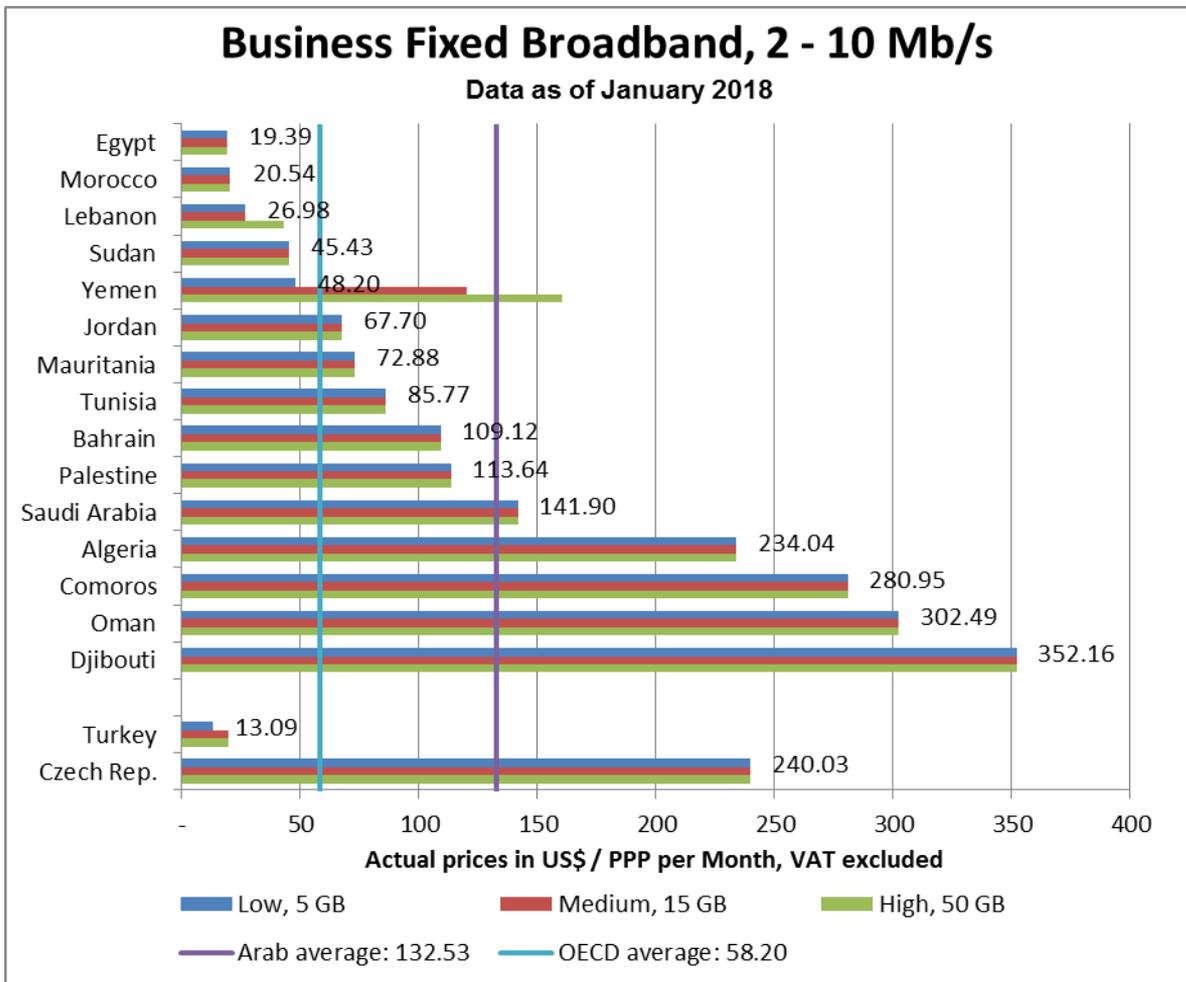
Total monthly cost calculated based on three usage baskets:

Low usage: 5 GB  
 Medium usage: 10 GB  
 High usage: 20 GB.

Average lines are based on average across the overall results for the 3 usage levels.



# BUSINESS FIXED BROADBAND LOW SPEED OECD 2014 BASKET > 2 MB/S UP TO 10 MB/S



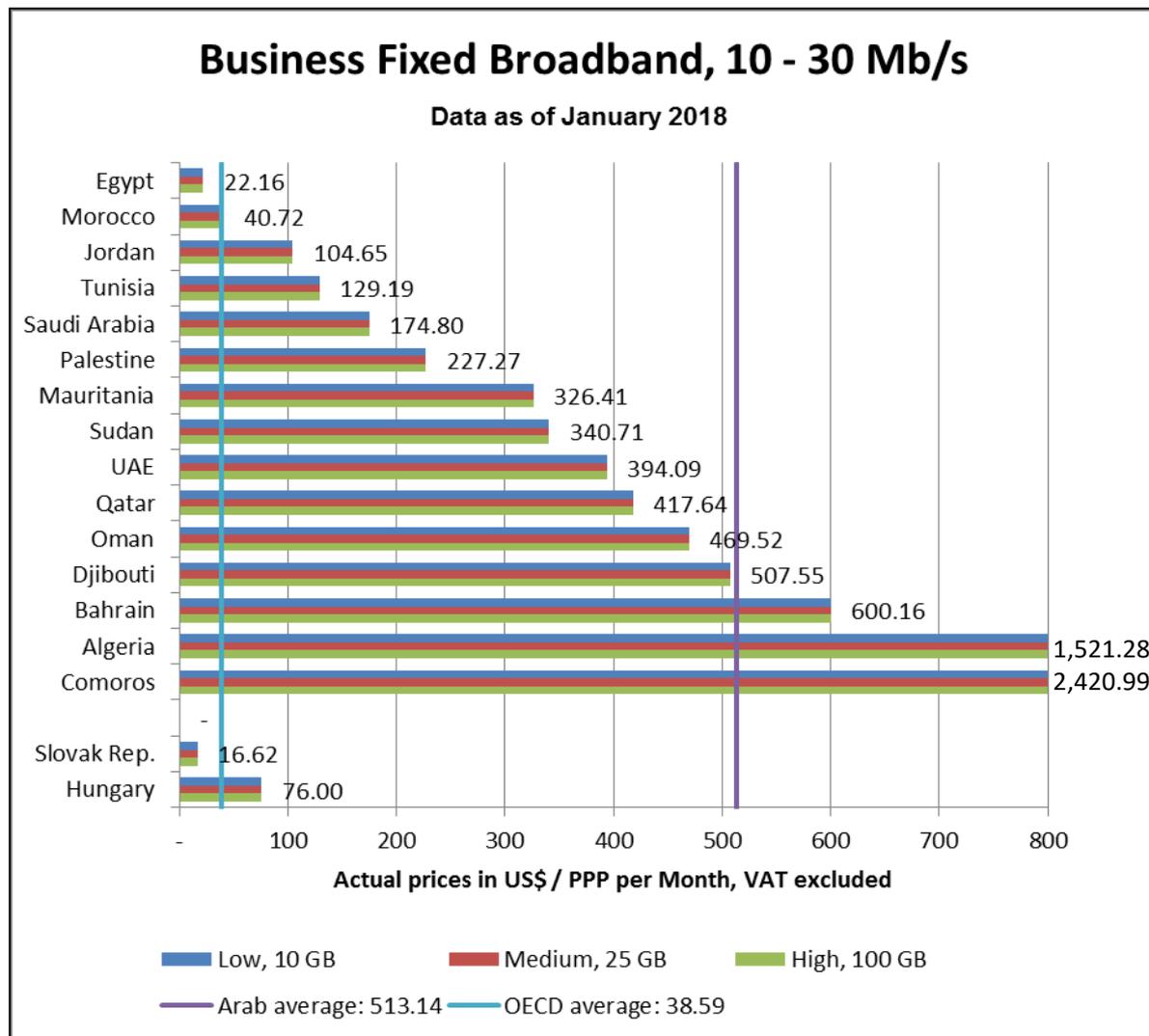
Total monthly cost calculated based on three usage baskets:

Low usage: 5 GB  
 Medium usage: 15 GB  
 High usage: 50 GB.

Average lines are based on average across the overall results for the 3 usage levels.



# BUSINESS FIXED BROADBAND MEDIUM SPEED OECD 2014 BASKET > 10 MB/S UP TO 30 MB/S



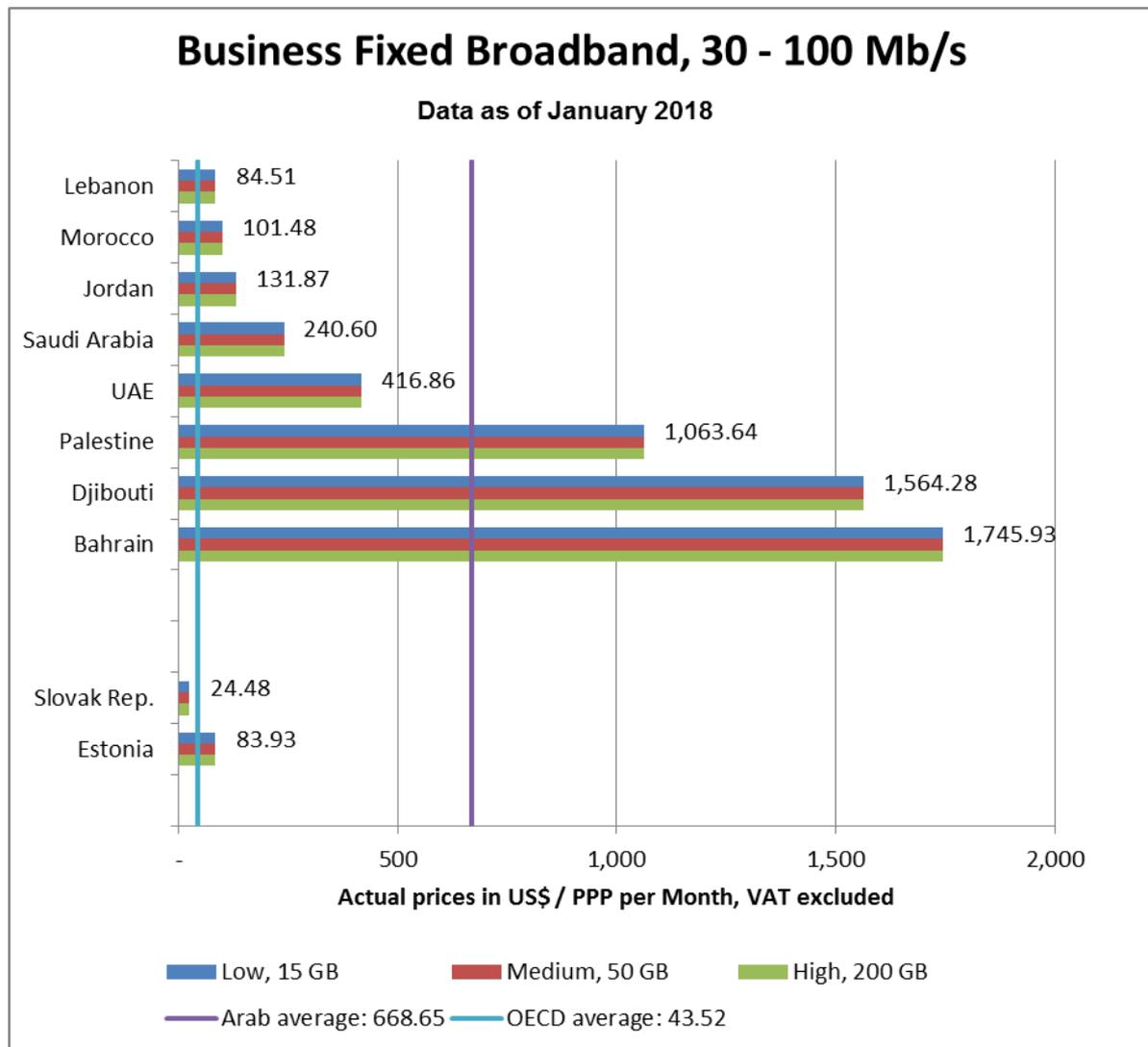
Total monthly cost calculated based on three usage baskets:

Low usage: 10 GB  
 Medium usage: 25 GB  
 High usage: 100 GB.

Average lines are based on average across the overall results for the 3 usage levels.



# BUSINESS FIXED BROADBAND HIGH SPEED OECD 2014 BASKET > 30 MB/S UP TO 100 MB/S



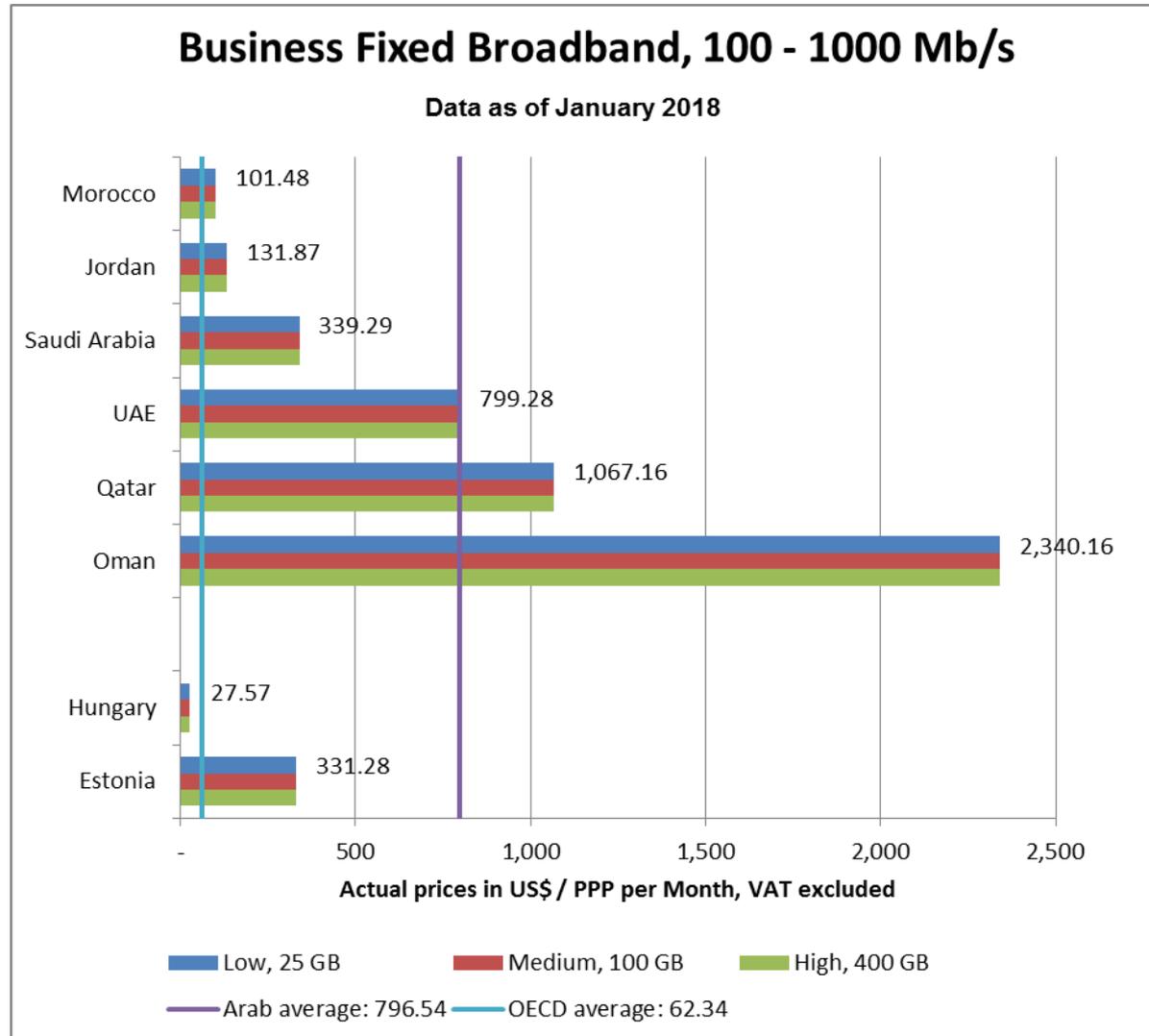
Total monthly cost calculated based on three usage baskets:

Low usage: 15 GB  
 Medium usage: 50 GB  
 High usage: 200 GB.

Average lines are based on average across the overall results for the 3 usage levels.



# BUSINESS FIXED BROADBAND HIGH SPEED OECD 2014 BASKET > 100 MB/S UP TO 1000 MB/S



Total monthly cost calculated based on three usage baskets:

Low usage: 25 GB  
 Medium usage: 100 GB  
 High usage: 400 GB.

Average lines are based on average across the overall results for the 3 usage levels.



# OBSERVATIONS FROM FIXED BROADBAND BASKET RESULTS



- There is a large variation in ranking according to the speed of service, for both residential services. The side-by-side tables below shows the 3 cheapest and 3 most expensive countries for each of the 5 baskets considered for medium usage (low and high usage may differ, but typically don't)

Residential-medium usage	Cheapest			Most expensive			Business-medium usage	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd		1st	2nd	3rd	1st	2nd	3rd
0.25 - 2 Mb/s / 10 GB	Egypt	Syria	Yemen	Qatar	Mauritania	Lebanon	0.25 - 2 Mb/s / 10 GB	Egypt	Sudan	Morocco	Saudi Arabia	Algeria	Comoros
2 - 10 Mb/s / 15 GB	Syria	Egypt	Morocco	Comoros	Qatar	UAE	2 - 10 Mb/s / 15 GB	Egypt	Morocco	Lebanon	Djibouti	Oman	Comoros
10 - 30 Mb/s / 25 GB	Egypt	Tunisia	Bahrain	Sudan	Mauritania	Algeria	10 - 30 Mb/s / 25 GB	Egypt	Morocco	Jordan	Comoros	Algeria	Bahrain
30 - 100 Mb/s / 50 GB	Palestine	Jordan	Lebanon	UAE	Qatar	Oman	30 - 100 Mb/s / 50 GB	Lebanon	Morocco	Jordan	Bahrain	Djibouti	Palestine
100 - 1000 Mb/s / 100 GB	Palestine	Jordan	Morocco	UAE	Oman	Bahrain	100 - 1000 Mb/s / 100 GB	Morocco	Jordan	Saudi Arabia	Oman	Qatar	UAE

- Egypt features as one of the cheapest country for both residential and business services up to 30 Mb/s (speeds above 30 Mb/s were not available in Egypt at the time of data collection). Syria, Bahrain, Yemen, Morocco, Palestine and Tunisia are also among the cheapest for residential users. In addition to Egypt, Sudan, Morocco, Lebanon, Jordan and Saudi Arabia are the cheapest countries for business broadband. Residential users in UAE, Algeria, Qatar, Oman, Mauritania and Sudan, among others, face the most expensive costs for broadband, while for business users, Comoros, Algerian, Oman, Djibouti, Bahrain and UAE are among the most expensive.
- The number of Arab countries that are below the OECD average depends on the speed of service, and, for some countries, on the usage level. Generally, however, the greater the speed, the greater the variation in cost between the Arab countries and the OECD average.
- The Arab average residential cost is up to 5.5 times higher than the average OECD cost (similar to 2017). For business services, the average is up to 15.4 times higher (again, similar to 2017).
  - The residential figure continues to be skewed by particularly high costs in a number of countries, in particular, Qatar, Comoros, Mauritania, Sudan and, for high usage in particular, Yemen and Saudi Arabia. For business services, the Arab average is heavily skewed by a number of countries, including Comoros, Djibouti, Saudi Arabia, Algeria and Oman.
- Usage based charges are still prevalent, and appear in offers across 6 of the Arab countries, however, they have had limited impact on the basket results, and flat rate services have featured as the cheapest. In many OECD countries, usage-based charges often only apply for a very few ISPs.





# FIXED BROADBAND TIME SERIES ANALYSIS AND RANKING TABLES 2013-2018

# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 256 KB/S - 2 MB/S LOW USAGE



Total results for OECD L1: 0.25-2Mb/s, 5GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria	37.75	56.17	53.03	53.03	53.03
Bahrain	71.06	27.28	27.28	27.28	
Comoros	92.42	92.42	92.42	73.04	73.04
Djibouti	87.08	87.08	111.01		
Egypt	17.10	9.00	9.00	9.00	9.00
Iraq					
Jordan	71.96	71.96	67.97		
Kuwait					25.47
Lebanon	41.86	34.52	34.17	79.04	79.04
Libya	55.42	55.42	55.42	55.42	55.42
Mauritania	56.57	32.05	32.05	101.48	101.48
Morocco				58.64	58.64
Oman	115.43				
Palestine	49.97	72.43			
Qatar	144.29	144.29	144.29	174.50	162.69
Saudi Arabia	71.82			64.08	67.28
Somalia					
Sudan	18.40	15.33	15.33	37.63	37.63
Syria	11.80	5.38	5.38	9.16	9.16
Tunisia	30.75	30.75	49.96	51.63	
UAE	110.85	110.85	84.61	39.12	41.08
Yemen	33.66	24.80	24.80	24.80	16.83

<b>Arab average</b>	62.12	54.36	53.78	57.19	56.41
---------------------	-------	-------	-------	-------	-------

Below Arab average  
 Above Arab average

Ranking for OECD L1: 0.25-2Mb/s, 5GB, residential offers

	2013	2015	2016	2017	2018
Algeria	6	10	9	8	7
Bahrain	11	5	5	4	-
Comoros	15	14	13	12	11
Djibouti	14	13	14	-	-
Egypt	2	2	2	1	1
Iraq	-	-	-	-	-
Jordan	13	11	11	-	-
Kuwait	-	-	-	-	4
Lebanon	7	8	7	13	12
Libya	9	9	10	9	8
Mauritania	10	7	6	14	13
Morocco	-	-	-	10	9
Oman	17	-	-	-	-
Palestine	8	12	-	-	-
Qatar	18	16	15	15	14
Saudi Arabia	12	-	-	11	10
Somalia	-	-	-	-	-
Sudan	3	3	3	5	5
Syria	1	1	1	2	2
Tunisia	4	6	8	7	-
UAE	16	15	12	6	6
Yemen	5	4	4	3	3

Least expensive  
 Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 256 KB/S - 2 MB/S MEDIUM USAGE



Total results for OECD M1: 0.25-2Mb/s, 10GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria	37.75	56.17	53.03	53.03	53.03
Bahrain	93.01	27.28	27.28	27.28	
Comoros	92.42	92.42	92.42	73.04	73.04
Djibouti	87.08	122.97	111.01		
Egypt	17.10	9.00	9.00	9.00	9.00
Iraq					
Jordan	71.96	71.96	67.97		
Kuwait					25.47
Lebanon	51.94	34.52	34.17	79.04	79.04
Libya	55.42	55.42	55.42	55.42	55.42
Mauritania	56.57	32.05	32.05	101.48	101.48
Morocco				58.64	58.64
Oman	135.47				
Palestine	49.97	72.43			
Qatar	144.29	144.29	144.29	174.50	162.69
Saudi Arabia	71.82			64.08	67.28
Somalia					
Sudan	18.40	18.40	18.40	37.63	37.63
Syria	11.80	5.38	5.38	12.94	12.94
Tunisia	30.75	30.75	49.96	51.63	
UAE	110.85	110.85	84.61	39.12	41.08
Yemen	33.66	24.80	24.80	32.77	22.14

Arab average	65.02	56.79	53.99	57.97	57.06
--------------	-------	-------	-------	-------	-------

Below Arab average  
 Above Arab average

Ranking for OECD M1: 0.25-2Mb/s, 10GB, residential offers

	2013	2015	2016	2017	2018
Algeria	6	10	9	8	7
Bahrain	15	5	5	3	-
Comoros	14	13	13	12	11
Djibouti	13	15	14	-	-
Egypt	2	2	2	1	1
Iraq	-	-	-	-	-
Jordan	12	11	11	-	-
Kuwait	-	-	-	-	4
Lebanon	8	8	7	13	12
Libya	9	9	10	9	8
Mauritania	10	7	6	14	13
Morocco	-	-	-	10	9
Oman	17	-	-	-	-
Palestine	7	12	-	-	-
Qatar	18	16	15	15	14
Saudi Arabia	11	-	-	11	10
Somalia	-	-	-	-	-
Sudan	3	3	3	5	5
Syria	1	1	1	2	2
Tunisia	4	6	8	7	-
UAE	16	14	12	6	6
Yemen	5	4	4	4	3

Least expensive  
 Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 256 KB/S - 2 MB/S HIGH USAGE



Total results for OECD H1: 0.25-2Mb/s, 20GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria	37.75	56.17	53.03	53.03	53.03
Bahrain	137.06	27.28	27.28	27.28	
Comoros	92.42	92.42	92.42	73.04	73.04
Djibouti	182.80	302.44	111.01		
Egypt	17.10	9.00	9.00	17.10	17.10
Iraq					
Jordan	144.29	144.29	140.29		
Kuwait					25.47
Lebanon	98.58	34.52	34.17	79.04	79.04
Libya	142.16	55.42	55.42	55.42	55.42
Mauritania	56.57	32.05	56.57	101.48	101.48
Morocco				58.64	58.64
Oman	135.47				
Palestine	49.97	72.43			
Qatar	144.29	144.29	144.29	174.50	162.69
Saudi Arabia	71.82			64.08	67.28
Somalia					
Sudan	27.60	27.60	27.60	37.63	37.63
Syria	11.80	5.38	7.64	12.94	12.94
Tunisia	30.75	30.75	49.96	51.63	
UAE	110.85	110.85	110.85	39.12	41.08
Yemen	33.66	24.80	32.77	72.63	72.63

Arab average	84.72	73.11	63.49	61.17	61.25
--------------	-------	-------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for OECD H1: 0.25-2Mb/s, 20GB, residential offers

	2013	2015	2016	2017	2018
Algeria	6	10	8	7	6
Bahrain	14	4	3	3	-
Comoros	10	12	11	12	11
Djibouti	18	16	13	-	-
Egypt	2	2	2	2	2
Iraq	-	-	-	-	-
Jordan	17	15	14	-	-
Kuwait	-	-	-	-	3
Lebanon	11	8	6	13	12
Libya	15	9	9	8	7
Mauritania	8	7	10	14	13
Morocco	-	-	-	9	8
Oman	13	-	-	-	-
Palestine	7	11	-	-	-
Qatar	16	14	15	15	14
Saudi Arabia	9	-	-	10	9
Somalia	-	-	-	-	-
Sudan	3	5	4	4	4
Syria	1	1	1	1	1
Tunisia	4	6	7	6	-
UAE	12	13	12	5	5
Yemen	5	3	5	11	10

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 2 MB/S - 10 MB/S LOW USAGE



Total results for OECD L2: 2-10Mb/s, 5GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria	113.97	100.72	69.60	69.60	69.60
Bahrain	71.06	27.28	27.28	27.28	54.56
Comoros	601.55	362.52	362.52	249.92	249.92
Djibouti			111.01	87.40	87.68
Egypt	13.50	13.50	13.50	13.50	25.20
Iraq					
Jordan	108.13	100.42	95.82	62.04	62.04
Kuwait					41.20
Lebanon	98.58	34.52	34.17	33.25	33.25
Libya					
Mauritania	247.84	149.75	149.75	101.48	101.48
Morocco	29.57	29.57	30.31	29.57	29.57
Oman	115.43	115.43	115.43	102.07	102.07
Palestine	76.85	90.11	103.10	42.71	42.71
Qatar	203.34	141.02	141.02	171.24	221.74
Saudi Arabia	71.82	108.09	108.09	64.08	67.28
Somalia					
Sudan	76.66	76.66	76.66	82.79	82.79
Syria	46.96	18.98	18.98	22.01	22.01
Tunisia	30.75	30.75	30.75	31.39	34.08
UAE	163.34	163.34	163.34	159.84	167.84
Yemen	97.42	72.63	72.63	53.14	53.14

<b>Arab average</b>	127.46	96.19	95.78	77.96	81.48
---------------------	--------	-------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for OECD L2: 2-10Mb/s, 5GB, residential offers

	2013	2015	2016	2017	2018
Algeria	12	11	7	11	12
Bahrain	5	3	3	3	9
Comoros	17	17	18	18	19
Djibouti	-	-	13	13	14
Egypt	1	1	1	1	2
Iraq	-	-	-	-	-
Jordan	11	10	10	9	10
Kuwait	-	-	-	-	6
Lebanon	10	6	6	6	4
Libya	-	-	-	-	-
Mauritania	16	15	16	14	15
Morocco	2	4	4	4	3
Oman	13	13	14	15	16
Palestine	8	9	11	7	7
Qatar	15	14	15	17	18
Saudi Arabia	6	12	12	10	11
Somalia	-	-	-	-	-
Sudan	7	8	9	12	13
Syria	4	2	2	2	1
Tunisia	3	5	5	5	5
UAE	14	16	17	16	17
Yemen	9	7	8	8	8

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 2 MB/S - 10 MB/S MEDIUM USAGE



Total results for OECD M2: 2-10Mb/s, 15GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria	113.97	100.72	69.60	69.60	69.60
Bahrain	109.12	27.28	27.28	27.28	54.56
Comoros	601.55	362.52	362.52	249.92	249.92
Djibouti			111.01	87.40	87.68
Egypt	13.50	18.00	18.00	18.00	25.20
Iraq					
Jordan	108.13	100.42	95.82	62.04	62.04
Kuwait					41.20
Lebanon	98.58	34.52	34.17	33.25	33.25
Libya					
Mauritania	247.84	149.75	149.75	101.48	101.48
Morocco	29.57	29.57	30.31	29.57	29.57
Oman	135.47	135.47	135.47	102.07	102.07
Palestine	76.85	90.11	103.10	42.71	42.71
Qatar	203.34	141.02	141.02	171.24	221.74
Saudi Arabia	71.82	108.09	108.09	64.08	67.28
Somalia					
Sudan	76.66	76.66	76.66	82.79	82.79
Syria	46.96	18.98	18.98	22.01	22.01
Tunisia	30.75	30.75	30.75	31.39	34.08
UAE	163.34	163.34	163.34	159.84	167.84
Yemen	97.42	72.63	72.63	72.63	72.63

Arab average	130.87	97.64	97.14	79.29	82.51
--------------	--------	-------	-------	-------	-------

■ Below Arab average  
■ Above Arab average

Ranking for OECD M2: 2-10Mb/s, 15GB, residential offers

	2013	2015	2016	2017	2018
Algeria	12	11	7	10	11
Bahrain	11	3	3	3	8
Comoros	17	17	18	18	19
Djibouti	-	-	13	13	14
Egypt	1	1	1	1	2
Iraq	-	-	-	-	-
Jordan	10	10	10	8	9
Kuwait	-	-	-	-	6
Lebanon	9	6	6	6	4
Libya	-	-	-	-	-
Mauritania	16	15	16	14	15
Morocco	2	4	4	4	3
Oman	13	13	14	15	16
Palestine	7	9	11	7	7
Qatar	15	14	15	17	18
Saudi Arabia	5	12	12	9	10
Somalia	-	-	-	-	-
Sudan	6	8	9	12	13
Syria	4	2	2	2	1
Tunisia	3	5	5	5	5
UAE	14	16	17	16	17
Yemen	8	7	8	11	12

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 2 MB/S - 10 MB/S HIGH USAGE



Total results for OECD H2: 2-10Mb/s, 50GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria	113.97	100.72	69.60	69.60	69.60
Bahrain	275.42	27.28	54.56	54.56	54.56
Comoros	601.55	362.52	362.52	249.92	249.92
Djibouti			111.01	87.40	87.68
Egypt	13.50	25.20	25.20	25.20	25.20
Iraq					
Jordan	108.13	100.42	95.82	62.04	62.04
Kuwait					41.20
Lebanon	325.47	59.73	59.38	54.23	52.78
Libya					
Mauritania	247.84	149.75	149.75	101.48	101.48
Morocco	29.57	29.57	30.31	29.57	29.57
Oman	135.47	135.47	135.47	135.47	135.47
Palestine	76.85	90.11	103.10	42.71	42.71
Qatar	203.34	141.02	141.02	171.24	221.74
Saudi Arabia	71.82	108.09	108.09	2675.57	2809.35
Somalia					
Sudan	76.66	76.66	76.66	82.79	82.79
Syria	46.96	18.98	18.98	22.01	22.01
Tunisia	30.75	30.75	30.75	31.39	34.08
UAE	163.34	163.34	163.34	159.84	167.84
Yemen	97.42	72.63	72.63	176.84	

Arab average	154.00	99.54	100.46	235.10	238.33
--------------	--------	-------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD H2: 2-10Mb/s, 50GB, residential offers

	2013	2015	2016	2017	2018
Algeria	10	11	7	9	10
Bahrain	15	3	5	7	8
Comoros	17	17	18	17	17
Djibouti	-	-	13	11	12
Egypt	1	2	2	2	2
Iraq	-	-	-	-	-
Jordan	9	10	10	8	9
Kuwait	-	-	-	-	5
Lebanon	16	6	6	6	7
Libya	-	-	-	-	-
Mauritania	14	15	16	12	13
Morocco	2	4	3	3	3
Oman	11	13	14	13	14
Palestine	7	9	11	5	6
Qatar	13	14	15	15	16
Saudi Arabia	5	12	12	18	18
Somalia	-	-	-	-	-
Sudan	6	8	9	10	11
Syria	4	1	1	1	1
Tunisia	3	5	4	4	4
UAE	12	16	17	14	15
Yemen	8	7	8	16	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 10 MB/S - 30 MB/S LOW USAGE



Total results for OECD L3: 10-30Mb/s, 10GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria				261.83	261.83
Bahrain	272.80	109.12	81.84	55.32	54.56
Comoros					
Djibouti					
Egypt	126.02	126.02	126.02	28.80	28.80
Iraq					
Jordan	129.01	114.88	109.48	77.63	77.63
Kuwait					98.87
Lebanon					
Libya					
Mauritania		385.16	385.16	454.49	454.49
Morocco	58.64	58.64	59.38	58.64	58.64
Oman	235.69	235.69	235.69	188.92	188.92
Palestine	235.91	162.27	168.63	55.23	55.23
Qatar	203.34	141.02	141.02	171.24	188.95
Saudi Arabia	144.36	108.09	108.09	145.08	152.34
Somalia					
Sudan				620.94	620.94
Syria				129.36	129.36
Tunisia	120.42	69.18	61.49	49.96	52.91
UAE	163.34	163.34	163.34	159.84	167.84
Yemen					

Arab average	168.95	152.13	149.10	175.52	172.75
--------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD L3: 10-30Mb/s, 10GB, residential offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	12	13
Bahrain	10	4	3	4	3
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	3	6	6	1	1
Iraq	-	-	-	-	-
Jordan	4	5	5	6	6
Kuwait	-	-	-	-	7
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	11	11	13	14
Morocco	1	1	1	5	5
Oman	8	10	10	11	11
Palestine	9	8	9	3	4
Qatar	7	7	7	10	12
Saudi Arabia	5	3	4	8	9
Somalia	-	-	-	-	-
Sudan	-	-	-	14	15
Syria	-	-	-	7	8
Tunisia	2	2	2	2	2
UAE	6	9	8	9	10
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 10 MB/S - 30 MB/S MEDIUM USAGE



Total results for OECD M3: 10-30Mb/s, 25GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria				261.83	261.83
Bahrain	272.80	109.12	81.84	55.32	54.56
Comoros					
Djibouti					
Egypt	126.02	126.02	126.02	28.80	28.80
Iraq					
Jordan	129.01	114.88	109.48	77.63	77.63
Kuwait					98.87
Lebanon					
Libya					
Mauritania		385.16	385.16	454.49	454.49
Morocco	58.64	58.64	59.38	58.64	58.64
Oman	235.69	235.69	235.69	188.92	188.92
Palestine	235.91	162.27	168.63	55.23	55.23
Qatar	203.34	141.02	141.02	171.24	188.95
Saudi Arabia	144.36	108.09	108.09	145.08	152.34
Somalia					
Sudan				620.94	620.94
Syria				129.36	129.36
Tunisia	120.42	69.18	61.49	49.96	52.91
UAE	163.34	163.34	163.34	159.84	167.84
Yemen					

<b>Arab average</b>	168.95	152.13	149.10	175.52	172.75
---------------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD M3: 10-30Mb/s, 25GB, residential offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	12	13
Bahrain	10	4	3	4	3
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	3	6	6	1	1
Iraq	-	-	-	-	-
Jordan	4	5	5	6	6
Kuwait	-	-	-	-	7
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	11	11	13	14
Morocco	1	1	1	5	5
Oman	8	10	10	11	11
Palestine	9	8	9	3	4
Qatar	7	7	7	10	12
Saudi Arabia	5	3	4	8	9
Somalia	-	-	-	-	-
Sudan	-	-	-	14	15
Syria	-	-	-	7	8
Tunisia	2	2	2	2	2
UAE	6	9	8	9	10
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 10 MB/S - 30 MB/S HIGH USAGE



Total results for OECD H3: 10-30Mb/s, 100GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria				261.83	261.83
Bahrain	327.36	109.12	81.84	66.23	54.56
Comoros					
Djibouti					
Egypt	126.02	126.02	126.02	28.80	28.80
Iraq					
Jordan	144.29	114.88	109.48	77.63	77.63
Kuwait					98.87
Lebanon					
Libya					
Mauritania		385.16	385.16	454.49	454.49
Morocco	58.64	58.64	59.38	58.64	58.64
Oman	235.69	235.69	235.69	188.92	188.92
Palestine	235.91	162.27	168.63	55.23	55.23
Qatar	203.34	141.02	141.02	171.24	188.95
Saudi Arabia	144.36	108.09	108.09	145.08	152.34
Somalia					
Sudan				620.94	620.94
Syria				129.36	129.36
Tunisia	120.42	69.18	61.49	49.96	52.91
UAE	163.34	163.34	163.34	159.84	167.84
Yemen					

Arab average	175.94	152.13	149.10	176.30	172.75
--------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD H3: 10-30Mb/s, 100GB, residential offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	12	13
Bahrain	10	4	3	5	3
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	3	6	6	1	1
Iraq	-	-	-	-	-
Jordan	4	5	5	6	6
Kuwait	-	-	-	-	7
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	11	11	13	14
Morocco	1	1	1	4	5
Oman	8	10	10	11	11
Palestine	9	8	9	3	4
Qatar	7	7	7	10	12
Saudi Arabia	5	3	4	8	9
Somalia	-	-	-	-	-
Sudan	-	-	-	14	15
Syria	-	-	-	7	8
Tunisia	2	2	2	2	2
UAE	6	9	8	9	10
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 30 MB/S - 100 MB/S LOW USAGE



Total results for OECD L4: 30-100Mb/s, 15GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain	409.20	272.80	272.80	164.44	109.88
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan		271.36	161.90	86.15	86.15
Kuwait					230.69
Lebanon					104.12
Libya					
Mauritania					
Morocco				146.13	146.13
Oman	402.71	369.30	369.30	235.69	235.69
Palestine			189.99	67.75	67.75
Qatar	301.94	298.68	298.68	259.81	248.00
Saudi Arabia	243.50	216.90	216.90	181.35	190.42
Somalia					
Sudan					
Syria					
Tunisia				122.28	122.41
UAE	320.81	320.81	268.32	253.93	266.63
Yemen					

<b>Arab average</b>	335.63	291.64	253.98	168.61	164.35
---------------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD L4: 30-100Mb/s, 15GB, residential offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	5	3	5	5	4
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	2	1	2	2
Kuwait	-	-	-	-	8
Lebanon	-	-	-	-	3
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	4	6
Oman	4	6	7	7	9
Palestine	-	-	2	1	1
Qatar	2	4	6	9	10
Saudi Arabia	1	1	3	6	7
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	3	5
UAE	3	5	4	8	11
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 30 MB/S - 100 MB/S MEDIUM USAGE



Total results for OECD M4: 30-100Mb/s, 50GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain	409.20	272.80	272.80	164.44	109.88
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan		271.36	161.90	86.15	86.15
Kuwait					230.69
Lebanon					104.12
Libya					
Mauritania					
Morocco				146.13	146.13
Oman	402.71	369.30	369.30	235.69	235.69
Palestine			189.99	67.75	67.75
Qatar	301.94	298.68	298.68	259.81	248.00
Saudi Arabia	243.50	216.90	216.90	181.35	190.42
Somalia					
Sudan					
Syria					
Tunisia				122.28	122.41
UAE	320.81	320.81	268.32	253.93	266.63
Yemen					

<b>Arab average</b>	335.63	291.64	253.98	168.61	164.35
---------------------	--------	--------	--------	--------	--------

Below Arab average  
 Above Arab average

Ranking for OECD M4: 30-100Mb/s, 50GB, residential offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	5	3	5	5	4
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	2	1	2	2
Kuwait	-	-	-	-	8
Lebanon	-	-	-	-	3
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	4	6
Oman	4	6	7	7	9
Palestine	-	-	2	1	1
Qatar	2	4	6	9	10
Saudi Arabia	1	1	3	6	7
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	3	5
UAE	3	5	4	8	11
Yemen	-	-	-	-	-

Least expensive  
 Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 30 MB/S - 100 MB/S HIGH USAGE



Total results for OECD H4: 30-100Mb/s, 200GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain	1247.25	272.80	272.80	164.44	137.16
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan		271.36	161.90	86.15	86.15
Kuwait					230.69
Lebanon					104.12
Libya					
Mauritania					
Morocco				146.13	146.13
Oman	402.71	369.30	369.30	235.69	235.69
Palestine			189.99	67.75	67.75
Qatar	301.94	298.68	298.68	259.81	248.00
Saudi Arabia	243.50	216.90	216.90	181.35	190.42
Somalia					
Sudan					
Syria					
Tunisia				122.28	122.41
UAE	320.81	320.81	268.32	253.93	266.63
Yemen					

<b>Arab average</b>	503.24	291.64	253.98	168.61	166.83
---------------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD H4: 30-100Mb/s, 200GB, residential offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	5	3	5	5	5
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	2	1	2	2
Kuwait	-	-	-	-	8
Lebanon	-	-	-	-	3
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	4	6
Oman	4	6	7	7	9
Palestine	-	-	2	1	1
Qatar	2	4	6	9	10
Saudi Arabia	1	1	3	6	7
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	3	4
UAE	3	5	4	8	11
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 100 MB/S - 1000 MB/S LOW USAGE



Total results for OECD L5: 100-1000Mb/s, 25GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain	709.29	409.20	409.20	409.96	381.92
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan				121.79	121.79
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco				146.13	146.13
Oman				536.32	536.32
Palestine				114.14	114.14
Qatar	390.52	387.25	387.25	318.86	336.57
Saudi Arabia	366.82	325.71	325.71	290.17	304.67
Somalia					
Sudan					
Syria					
Tunisia				269.61	269.74
UAE	530.77	530.77	530.77	527.27	553.63
Yemen					

<b>Arab average</b>	499.35	413.23	413.23	303.80	307.21
---------------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD L5: 100-1000Mb/s, 25GB, residential offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	4	3	3	7	7
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	-	2	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	3	3
Oman	-	-	-	9	8
Palestine	-	-	-	1	1
Qatar	2	2	2	6	6
Saudi Arabia	1	1	1	5	5
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	4	4
UAE	3	4	4	8	9
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 100 MB/S - 1000 MB/S MEDIUM USAGE



Total results for OECD M5: 100-1000Mb/s, 100GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain	709.29	409.20	409.20	409.96	381.92
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan				121.79	121.79
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco				146.13	146.13
Oman				536.32	536.32
Palestine				114.14	114.14
Qatar	390.52	387.25	387.25	318.86	336.57
Saudi Arabia	366.82	325.71	325.71	290.17	304.67
Somalia					
Sudan					
Syria					
Tunisia				269.61	269.74
UAE	530.77	530.77	530.77	527.27	553.63
Yemen					

<b>Arab average</b>	499.35	413.23	413.23	303.80	307.21
---------------------	--------	--------	--------	--------	--------

Below Arab average  
 Above Arab average

Ranking for OECD M5: 100-1000Mb/s, 100GB, residential offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	4	3	3	7	7
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	-	2	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	3	3
Oman	-	-	-	9	8
Palestine	-	-	-	1	1
Qatar	2	2	2	6	6
Saudi Arabia	1	1	1	5	5
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	4	4
UAE	3	4	4	8	9
Yemen	-	-	-	-	-

Least expensive  
 Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS RESIDENTIAL 100 MB/S - 1000 MB/S HIGH USAGE



Total results for OECD H5: 100-1000Mb/s, 400GB, Residential offers  
Results in US\$ / PPP VAT included, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain	2385.38	409.20	409.20	409.96	381.92
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan				121.79	121.79
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco				146.13	146.13
Oman				536.32	536.32
Palestine				114.14	114.14
Qatar	390.52	387.25	387.25	318.86	336.57
Saudi Arabia	366.82	325.71	325.71	290.17	304.67
Somalia					
Sudan					
Syria					
Tunisia				269.61	269.74
UAE	530.77	530.77	530.77	527.27	553.63
Yemen					

Arab average	918.37	413.23	413.23	303.80	307.21
--------------	--------	--------	--------	--------	--------

Below Arab average  
 Above Arab average

Ranking for OECD H5: 100-1000Mb/s, 400GB, residential offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	4	3	3	7	7
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	-	2	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	3	3
Oman	-	-	-	9	8
Palestine	-	-	-	1	1
Qatar	2	2	2	6	6
Saudi Arabia	1	1	1	5	5
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	4	4
UAE	3	4	4	8	9
Yemen	-	-	-	-	-

Least expensive  
 Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 256 KB/S - 2 MB/S LOW USAGE



Total results for OECD L1: 0.25-2Mb/s, 5GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria	106.92	301.68	234.04	234.04	234.04
Bahrain	81.84	81.84	81.84	81.84	81.84
Comoros				182.18	182.18
Djibouti	459.86	459.86	418.05	3624.68	3716.09
Egypt	15.00	15.00	6.93	6.93	6.93
Iraq					
Jordan	110.10		70.82	67.70	67.70
Kuwait					
Lebanon	37.71	31.10	27.74	64.15	64.15
Libya	55.42	55.42	55.42	55.42	55.42
Mauritania		49.61	42.04	72.88	72.88
Morocco				40.72	40.72
Oman	100.73	100.73	100.73	100.73	
Palestine	109.42				
Qatar	360.99	357.55	357.55		
Saudi Arabia	404.62			385.35	385.35
Somalia					
Sudan	13.63	11.36	8.41	20.65	20.65
Syria					
Tunisia	989.74	999.31			
UAE	180.61	180.61	147.06	146.91	
Yemen	32.05	69.73	66.41	66.41	66.41

Arab average	203.91	208.75	124.39	343.37	384.18
--------------	--------	--------	--------	--------	--------

 Below Arab average  
 Above Arab average

Ranking for OECD L1: 0.25-2Mb/s, 5GB, business offers

	2013	2015	2016	2017	2018
Algeria	8	10	11	13	11
Bahrain	6	7	8	9	9
Comoros	-	-	-	12	10
Djibouti	14	12	13	15	13
Egypt	2	2	1	1	1
Iraq	-	-	-	-	-
Jordan	10	-	7	7	7
Kuwait	-	-	-	-	-
Lebanon	4	3	3	5	5
Libya	5	5	5	4	4
Mauritania	-	4	4	8	8
Morocco	-	-	-	3	3
Oman	7	8	9	10	-
Palestine	9	-	-	-	-
Qatar	12	11	12	-	-
Saudi Arabia	13	-	-	14	12
Somalia	-	-	-	-	-
Sudan	1	1	2	2	2
Syria	-	-	-	-	-
Tunisia	15	13	-	-	-
UAE	11	9	10	11	-
Yemen	3	6	6	6	6

 Least expensive  
 Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 256 KB/S - 2 MB/S MEDIUM USAGE



Total results for OECD M1: 0.25-2Mb/s, 10GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria	106.92	301.68	234.04	234.04	234.04
Bahrain	81.84	81.84	81.84	81.84	81.84
Comoros				182.18	182.18
Djibouti	459.86	459.86	418.05	3624.68	3716.09
Egypt	15.00	15.00	6.93	6.93	6.93
Iraq					
Jordan	110.10		70.82	67.70	67.70
Kuwait					
Lebanon	46.79	31.10	27.74	64.15	64.15
Libya	55.42	55.42	55.42	55.42	55.42
Mauritania		49.61	42.04	72.88	72.88
Morocco				40.72	40.72
Oman	128.79	128.79	128.79	128.79	
Palestine	109.42				
Qatar	360.99	357.55	357.55		
Saudi Arabia	404.62			385.35	385.35
Somalia					
Sudan	13.63	13.63	10.10	20.65	20.65
Syria					
Tunisia	989.74	999.31			
UAE	239.40	304.38	147.06	146.91	
Yemen	32.05	69.73	66.41	66.41	66.41

Arab average	210.30	220.61	126.68	345.24	384.18
--------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD M1: 0.25-2Mb/s, 10GB, business offers

	2013	2015	2016	2017	2018
Algeria	7	9	11	13	11
Bahrain	6	7	8	9	9
Comoros	-	-	-	12	10
Djibouti	14	12	13	15	13
Egypt	2	2	1	1	1
Iraq	-	-	-	-	-
Jordan	9	-	7	7	7
Kuwait	-	-	-	-	-
Lebanon	4	3	3	5	5
Libya	5	5	5	4	4
Mauritania	-	4	4	8	8
Morocco	-	-	-	3	3
Oman	10	8	9	10	-
Palestine	8	-	-	-	-
Qatar	12	11	12	-	-
Saudi Arabia	13	-	-	14	12
Somalia	-	-	-	-	-
Sudan	1	1	2	2	2
Syria	-	-	-	-	-
Tunisia	15	13	-	-	-
UAE	11	10	10	11	-
Yemen	3	6	6	6	6

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 256 KB/S - 2 MB/S HIGH USAGE



Total results for OECD H1: 0.25-2Mb/s, 20GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria	106.92	301.68	234.04	234.04	234.04
Bahrain	81.84	81.84	81.84	81.84	81.84
Comoros				182.18	182.18
Djibouti	459.86	459.86	418.05	3624.68	3716.09
Egypt	15.00	15.00	6.93	13.16	13.16
Iraq					
Jordan	159.98		70.82	67.70	67.70
Kuwait					
Lebanon	88.81	31.10	27.74	64.15	64.15
Libya	142.16	55.42	55.42	55.42	55.42
Mauritania		49.61	63.62	72.88	72.88
Morocco				40.72	40.72
Oman	188.92	188.92	188.92	188.92	
Palestine	109.42				
Qatar	360.99	357.55	357.55		
Saudi Arabia	404.62			385.35	385.35
Somalia					
Sudan	20.44	20.44	15.14	20.65	20.65
Syria					
Tunisia	989.74	999.31			
UAE	239.40	304.38	147.06	146.91	
Yemen	32.05	69.73	102.56	66.41	66.41

Arab average	226.68	225.76	136.13	349.67	384.66
--------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD H1: 0.25-2Mb/s, 20GB, business offers

	2013	2015	2016	2017	2018
Algeria	6	9	11	13	11
Bahrain	4	7	7	9	9
Comoros	-	-	-	11	10
Djibouti	14	12	13	15	13
Egypt	1	1	1	1	1
Iraq	-	-	-	-	-
Jordan	9	-	6	7	7
Kuwait	-	-	-	-	-
Lebanon	5	3	3	5	5
Libya	8	5	4	4	4
Mauritania	-	4	5	8	8
Morocco	-	-	-	3	3
Oman	10	8	10	12	-
Palestine	7	-	-	-	-
Qatar	12	11	12	-	-
Saudi Arabia	13	-	-	14	12
Somalia	-	-	-	-	-
Sudan	2	2	2	2	2
Syria	-	-	-	-	-
Tunisia	15	13	-	-	-
UAE	11	10	9	10	-
Yemen	3	6	8	6	6

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 2 MB/S - 10 MB/S LOW USAGE



Total results for OECD L2: 2-10Mb/s, 5GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria	218.32	989.10	234.04	234.04	234.04
Bahrain	218.24	163.68	163.68	109.12	109.12
Comoros				280.95	280.95
Djibouti	764.42	764.42	447.72	387.38	352.16
Egypt	11.84	11.84	10.39	10.39	19.39
Iraq					
Jordan	147.51		101.27	67.70	67.70
Kuwait					
Lebanon	88.81	31.10	27.74	26.98	26.98
Libya					
Mauritania		210.03	177.99	72.88	72.88
Morocco	24.65	24.65	21.05	20.54	20.54
Oman	100.73	100.73	100.73	100.73	302.49
Palestine	150.05			113.64	113.64
Qatar	360.99	354.28	354.28		
Saudi Arabia	266.45			141.90	141.90
Somalia					
Sudan	56.78	56.78	42.06	45.43	45.43
Syria					
Tunisia	989.74	999.31	85.77	85.77	85.77
UAE	255.59	204.40	194.67	196.61	
Yemen	92.79	168.42	160.40	48.20	48.20

<b>Arab average</b>	249.79	313.75	151.56	121.39	128.08
---------------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD L2: 2-10Mb/s, 5GB, business offers

	2013	2015	2016	2017	2018
Algeria	10	12	12	14	12
Bahrain	9	6	9	10	9
Comoros	-	-	-	15	13
Djibouti	14	11	14	16	15
Egypt	1	1	1	1	1
Iraq	-	-	-	-	-
Jordan	7	-	7	6	6
Kuwait	-	-	-	-	-
Lebanon	4	3	3	3	3
Libya	-	-	-	-	-
Mauritania	-	9	10	7	7
Morocco	2	2	2	2	2
Oman	6	5	6	9	14
Palestine	8	-	-	11	10
Qatar	13	10	13	-	-
Saudi Arabia	12	-	-	12	11
Somalia	-	-	-	-	-
Sudan	3	4	4	4	4
Syria	-	-	-	-	-
Tunisia	15	13	5	8	8
UAE	11	8	11	13	-
Yemen	5	7	8	5	5

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 2 MB/S - 10 MB/S MEDIUM USAGE



Total results for OECD M2: 2-10Mb/s, 15GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria	218.32	989.10	234.04	234.04	234.04
Bahrain	218.24	163.68	163.68	109.12	109.12
Comoros				280.95	280.95
Djibouti	764.42	764.42	447.72	387.38	352.16
Egypt	11.84	15.79	13.85	13.85	19.39
Iraq					
Jordan	147.51		101.27	67.70	67.70
Kuwait					
Lebanon	88.81	31.10	27.74	26.98	26.98
Libya					
Mauritania		210.03	177.99	72.88	72.88
Morocco	24.65	24.65	21.05	20.54	20.54
Oman	158.86	158.86	158.86	158.86	302.49
Palestine	150.05			113.64	113.64
Qatar	360.99	354.28	354.28		
Saudi Arabia	266.45			141.90	141.90
Somalia					
Sudan	56.78	56.78	42.06	45.43	45.43
Syria					
Tunisia	989.74	999.31	85.77	85.77	85.77
UAE	615.32	204.40	194.67	224.24	
Yemen	92.79	168.42	160.40	120.50	120.50

Arab average	277.65	318.53	155.96	131.49	132.90
--------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD M2: 2-10Mb/s, 15GB, business offers

	2013	2015	2016	2017	2018
Algeria	10	12	12	14	12
Bahrain	9	6	9	8	8
Comoros	-	-	-	15	13
Djibouti	14	11	14	16	15
Egypt	1	1	1	1	1
Iraq	-	-	-	-	-
Jordan	6	-	6	5	5
Kuwait	-	-	-	-	-
Lebanon	4	3	3	3	3
Libya	-	-	-	-	-
Mauritania	-	9	10	6	6
Morocco	2	2	2	2	2
Oman	8	5	7	12	14
Palestine	7	-	-	9	9
Qatar	12	10	13	-	-
Saudi Arabia	11	-	-	11	11
Somalia	-	-	-	-	-
Sudan	3	4	4	4	4
Syria	-	-	-	-	-
Tunisia	15	13	5	7	7
UAE	13	8	11	13	-
Yemen	5	7	8	10	10

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 2 MB/S - 10 MB/S HIGH USAGE



Total results for OECD H2: 2-10Mb/s, 50GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria	218.32	989.10	234.04	234.04	234.04
Bahrain	218.24	163.68	163.68	109.12	109.12
Comoros				280.95	280.95
Djibouti	764.42	764.42	447.72	387.38	352.16
Egypt	11.84	34.74	19.39	19.39	19.39
Iraq					
Jordan	209.86		101.27	67.70	67.70
Kuwait					
Lebanon	293.22	53.81	48.20	44.02	42.84
Libya					
Mauritania		210.03	177.99	72.88	72.88
Morocco	24.65	24.65	21.05	20.54	20.54
Oman	302.49	302.49	302.49	302.49	302.49
Palestine	150.05			113.64	113.64
Qatar	360.99	354.28	354.28		
Saudi Arabia	266.45			141.90	141.90
Somalia					
Sudan	56.78	56.78	42.06	45.43	45.43
Syria					
Tunisia	989.74	999.31	85.77	85.77	85.77
UAE	756.79	204.40	194.67	224.24	
Yemen	92.79	168.42	160.40	160.40	160.40

Arab average	314.44	332.78	168.07	144.37	136.62
--------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD H2: 2-10Mb/s, 50GB, business offers

	2013	2015	2016	2017	2018
Algeria	8	12	11	13	12
Bahrain	7	5	8	8	8
Comoros	-	-	-	14	13
Djibouti	14	11	14	16	15
Egypt	1	2	1	1	1
Iraq	-	-	-	-	-
Jordan	6	-	6	5	5
Kuwait	-	-	-	-	-
Lebanon	10	3	4	3	3
Libya	-	-	-	-	-
Mauritania	-	8	9	6	6
Morocco	2	1	2	2	2
Oman	11	9	12	15	14
Palestine	5	-	-	9	9
Qatar	12	10	13	-	-
Saudi Arabia	9	-	-	10	10
Somalia	-	-	-	-	-
Sudan	3	4	3	4	4
Syria	-	-	-	-	-
Tunisia	15	13	5	7	7
UAE	13	7	10	12	-
Yemen	4	6	7	11	11

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 10 MB/S - 30 MB/S LOW USAGE



Total results for OECD L3: 10-30Mb/s, 10GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria			1521.28	1521.28	1521.28
Bahrain	822.19	685.79	685.79	600.16	600.16
Comoros				2420.99	2420.99
Djibouti			892.69	558.30	507.55
Egypt	110.54	110.54	96.97	22.16	22.16
Iraq					
Jordan	209.86		152.04	108.01	104.65
Kuwait					
Lebanon					
Libya					
Mauritania		492.65	417.50	326.41	326.41
Morocco	48.87	48.87	41.23	40.72	40.72
Oman	1211.09	1211.09	1211.09	1211.09	469.52
Palestine	380.49			227.27	227.27
Qatar	360.99	354.28	354.28	417.64	417.64
Saudi Arabia	280.26			174.80	174.80
Somalia					
Sudan				340.71	340.71
Syria					
Tunisia	2995.15	3010.58	129.19	129.19	129.19
UAE	359.37	359.37	342.26	322.87	394.09
Yemen					

Arab average	677.88	784.15	531.30	561.44	513.14
--------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD L3: 10-30Mb/s, 10GB, business offers

	2013	2015	2016	2017	2018
Algeria	-	-	11	14	14
Bahrain	8	6	8	12	13
Comoros	-	-	-	15	15
Djibouti	-	-	9	11	12
Egypt	2	2	2	1	1
Iraq	-	-	-	-	-
Jordan	3	-	4	3	3
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	5	7	8	7
Morocco	1	1	1	2	2
Oman	9	7	10	13	11
Palestine	7	-	-	6	6
Qatar	6	3	6	10	10
Saudi Arabia	4	-	-	5	5
Somalia	-	-	-	-	-
Sudan	-	-	-	9	8
Syria	-	-	-	-	-
Tunisia	10	8	3	4	4
UAE	5	4	5	7	9
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 10 MB/S - 30 MB/S MEDIUM USAGE



Total results for OECD M3: 10-30Mb/s, 25GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria			1521.28	1521.28	1521.28
Bahrain	822.19	685.79	685.79	600.16	600.16
Comoros				2420.99	2420.99
Djibouti			892.69	558.30	507.55
Egypt	110.54	110.54	96.97	22.16	22.16
Iraq					
Jordan	209.86		152.04	108.01	104.65
Kuwait					
Lebanon					
Libya					
Mauritania		492.65	417.50	326.41	326.41
Morocco	48.87	48.87	41.23	40.72	40.72
Oman	1211.09	1211.09	1211.09	1211.09	469.52
Palestine	380.49			227.27	227.27
Qatar	360.99	354.28	354.28	417.64	417.64
Saudi Arabia	280.26			174.80	174.80
Somalia					
Sudan				340.71	340.71
Syria					
Tunisia	2995.15	3010.58	129.19	129.19	129.19
UAE	1007.54	369.37	351.78	322.87	394.09
Yemen					

Arab average	742.70	785.40	532.17	561.44	513.14
--------------	--------	--------	--------	--------	--------

Below Arab average  
 Above Arab average

Ranking for OECD M3: 10-30Mb/s, 25GB, business offers

	2013	2015	2016	2017	2018
Algeria	-	-	11	14	14
Bahrain	7	6	8	12	13
Comoros	-	-	-	15	15
Djibouti	-	-	9	11	12
Egypt	2	2	2	1	1
Iraq	-	-	-	-	-
Jordan	3	-	4	3	3
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	5	7	8	7
Morocco	1	1	1	2	2
Oman	9	7	10	13	11
Palestine	6	-	-	6	6
Qatar	5	3	6	10	10
Saudi Arabia	4	-	-	5	5
Somalia	-	-	-	-	-
Sudan	-	-	-	9	8
Syria	-	-	-	-	-
Tunisia	10	8	3	4	4
UAE	8	4	5	7	9
Yemen	-	-	-	-	-

Least expensive  
 Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 10 MB/S - 30 MB/S HIGH USAGE



Total results for OECD H3: 10-30Mb/s, 100GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria			1521.28	1521.28	1521.28
Bahrain	822.19	685.79	685.79	600.16	600.16
Comoros				2420.99	2420.99
Djibouti			892.69	558.30	507.55
Egypt	110.54	110.54	96.97	22.16	22.16
Iraq					
Jordan	334.56		152.04	108.01	104.65
Kuwait					
Lebanon					
Libya					
Mauritania		492.65	417.50	326.41	326.41
Morocco	48.87	48.87	41.23	40.72	40.72
Oman	1211.09	1211.09	1211.09	1211.09	469.52
Palestine	380.49			227.27	227.27
Qatar	360.99	354.28	354.28	417.64	417.64
Saudi Arabia	280.26			174.80	174.80
Somalia					
Sudan				340.71	340.71
Syria					
Tunisia	2995.15	3010.58	129.19	129.19	129.19
UAE	2431.45	369.37	351.78	322.87	394.09
Yemen					

Arab average	897.56	785.40	532.17	561.44	513.14
--------------	--------	--------	--------	--------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD H3: 10-30Mb/s, 100GB, business offers

	2013	2015	2016	2017	2018
Algeria	-	-	11	14	14
Bahrain	7	6	8	12	13
Comoros	-	-	-	15	15
Djibouti	-	-	9	11	12
Egypt	2	2	2	1	1
Iraq	-	-	-	-	-
Jordan	4	-	4	3	3
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	5	7	8	7
Morocco	1	1	1	2	2
Oman	8	7	10	13	11
Palestine	6	-	-	6	6
Qatar	5	3	6	10	10
Saudi Arabia	3	-	-	5	5
Somalia	-	-	-	-	-
Sudan	-	-	-	9	8
Syria	-	-	-	-	-
Tunisia	10	8	3	4	4
UAE	9	4	5	7	9
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 30 MB/S - 100 MB/S LOW USAGE



Total results for OECD L4: 30-100Mb/s, 15GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain				1745.93	1745.93
Comoros					
Djibouti		2178.17	1583.86	1564.28	
Egypt					
Iraq					
Jordan		215.49	131.87	131.87	
Kuwait					
Lebanon					84.51
Libya					
Mauritania					
Morocco			101.48	101.48	
Oman	3075.05	3075.05	3075.05	1872.50	
Palestine			1063.64	1063.64	
Qatar	715.28	708.57	708.57		
Saudi Arabia			240.60	240.60	
Somalia					
Sudan					
Syria					
Tunisia					
UAE	839.27	719.30	685.05	624.73	416.86
Yemen					

Arab average	777.27	1,500.97	1,372.46	1,070.89	802.41
--------------	--------	----------	----------	----------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD L4: 30-100Mb/s, 15GB, business offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	-	-	-	7	8
Comoros	-	-	-	-	-
Djibouti	-	-	4	6	7
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	1	2	3
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	1
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	1	2
Oman	-	3	5	8	9
Palestine	-	-	-	5	6
Qatar	1	1	3	-	-
Saudi Arabia	-	-	-	3	4
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	2	2	2	4	5
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 30 MB/S - 100 MB/S MEDIUM USAGE



Total results for OECD M4: 30-100Mb/s, 50GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain				1745.93	1745.93
Comoros					
Djibouti			2178.17	1583.86	1564.28
Egypt					
Iraq					
Jordan			215.49	131.87	131.87
Kuwait					
Lebanon					84.51
Libya					
Mauritania					
Morocco				101.48	101.48
Oman		3075.05	3075.05	3075.05	1872.50
Palestine				1063.64	1063.64
Qatar	715.28	708.57	708.57		
Saudi Arabia				240.60	240.60
Somalia					
Sudan					
Syria					
Tunisia					
UAE	839.27	719.30	685.05	624.73	416.86
Yemen					

Arab average	777.27	1,500.97	1,372.46	1,070.89	802.41
--------------	--------	----------	----------	----------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD M4: 30-100Mb/s, 50GB, business offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	-	-	-	7	8
Comoros	-	-	-	-	-
Djibouti	-	-	4	6	7
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	1	2	3
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	1
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	1	2
Oman	-	3	5	8	9
Palestine	-	-	-	5	6
Qatar	1	1	3	-	-
Saudi Arabia	-	-	-	3	4
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	2	2	2	4	5
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 30 MB/S - 100 MB/S HIGH USAGE



Total results for OECD H4: 30-100Mb/s, 200GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain				1745.93	1745.93
Comoros					
Djibouti		2178.17	1583.86	1564.28	
Egypt					
Iraq					
Jordan		215.49	131.87	131.87	
Kuwait					
Lebanon					84.51
Libya					
Mauritania					
Morocco			101.48	101.48	
Oman	3075.05	3075.05	3075.05	1872.50	
Palestine			1063.64	1063.64	
Qatar	715.28	708.57	708.57		
Saudi Arabia			240.60	240.60	
Somalia					
Sudan					
Syria					
Tunisia					
UAE	839.27	719.30	685.05	624.73	416.86
Yemen					

Arab average	777.27	1,500.97	1,372.46	1,070.89	802.41
--------------	--------	----------	----------	----------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD H4: 30-100Mb/s, 200GB, business offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	-	-	-	7	8
Comoros	-	-	-	-	-
Djibouti	-	-	4	6	7
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	1	2	3
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	1
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	1	2
Oman	-	3	5	8	9
Palestine	-	-	-	5	6
Qatar	1	1	3	-	-
Saudi Arabia	-	-	-	3	4
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	2	2	2	4	5
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 100 MB/S - 1 000 MB/S LOW USAGE



Total results for OECD L5: 100-1000Mb/s, 25GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain					
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan				185.62	131.87
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco				101.48	101.48
Oman		7350.80	7350.80	7350.80	2340.16
Palestine					
Qatar	1423.84	1417.13	1417.13	1067.16	1067.16
Saudi Arabia				339.29	339.29
Somalia					
Sudan					
Syria					
Tunisia					
UAE	1504.14	1504.14	1432.51	1313.54	799.28
Yemen					

<b>Arab average</b>	1,463.99	3,424.02	3,400.15	1,726.32	796.54
---------------------	----------	----------	----------	----------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD L5: 100-1000Mb/s, 25GB, business offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	-	-	-	-	-
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	-	2	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	1	1
Oman	-	3	3	6	6
Palestine	-	-	-	-	-
Qatar	1	1	1	4	5
Saudi Arabia	-	-	-	3	3
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	2	2	2	5	4
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 100 MB/S - 1 000 MB/S MEDIUM USAGE



Total results for OECD M5: 100-1000Mb/s, 100GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain					
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan				185.62	131.87
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco				101.48	101.48
Oman		7350.80	7350.80	7350.80	2340.16
Palestine					
Qatar	1423.84	1417.13	1417.13	1067.16	1067.16
Saudi Arabia				339.29	339.29
Somalia					
Sudan					
Syria					
Tunisia					
UAE	1504.14	1504.14	1432.51	1313.54	799.28
Yemen					

Arab average	1,463.99	3,424.02	3,400.15	1,726.32	796.54
--------------	----------	----------	----------	----------	--------

■ Below Arab average  
■ Above Arab average

Ranking for OECD M5: 100-1000Mb/s, 100GB, business offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	-	-	-	-	-
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	-	2	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	1	1
Oman	-	3	3	6	6
Palestine	-	-	-	-	-
Qatar	1	1	1	4	5
Saudi Arabia	-	-	-	3	3
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	2	2	2	5	4
Yemen	-	-	-	-	-

■ Least expensive  
■ Most expensive



# 2014 OECD FIXED BROADBAND BASKET RANKINGS BUSINESS 100 MB/S - 1 000 MB/S HIGH USAGE



Total results for OECD H5: 100-1000Mb/s, 400GB, Business offers  
Results in US\$ / PPP VAT excluded, lowest per country

	2013	2015	2016	2017	2018
Algeria					
Bahrain					
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan				185.62	131.87
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco				101.48	101.48
Oman		7350.80	7350.80	7350.80	2340.16
Palestine					
Qatar	1423.84	1417.13	1417.13	1067.16	1067.16
Saudi Arabia				339.29	339.29
Somalia					
Sudan					
Syria					
Tunisia					
UAE	1504.14	1504.14	1432.51	1313.54	799.28
Yemen					

<b>Arab average</b>	1,463.99	3,424.02	3,400.15	1,726.32	796.54
---------------------	----------	----------	----------	----------	--------

Below Arab average  
 Above Arab average

Ranking for OECD H5: 100-1000Mb/s, 400GB, business offers

	2013	2015	2016	2017	2018
Algeria	-	-	-	-	-
Bahrain	-	-	-	-	-
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	-	2	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	1	1
Oman	-	3	3	6	6
Palestine	-	-	-	-	-
Qatar	1	1	1	4	5
Saudi Arabia	-	-	-	3	3
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	2	2	2	5	4
Yemen	-	-	-	-	-

Least expensive  
 Most expensive



# OBSERVATIONS FROM FIXED BROADBAND TIME SERIES RESULTS



- The table below summarizes how the overall Arab average changed from 2017-2018. The picture is generally one of declining prices or relatively small increases.

Change in overall average 2017-2018	Residential			Business		
	Low	Medium	High	Low	Medium	High
0.25 - 2 Mb/s / 10 GB	↓	↓	↓	↑	↑	↑
2 - 10 Mb/s / 15 GB	↑	↑	↓	↑	↑	↓
10 - 30 Mb/s / 25 GB	↓	↓	↓	↓	↓	↓
30 - 100 Mb/s / 50 GB	↓	↓	↓	↓	↓	↓
100 - 1000 Mb/s / 100 GB	↑	↑	↑	↓	↓	↓

- The availability of low speed services up to 2 Mb/s, continues to decline, with offers no longer available in Bahrain and Tunisia being removed for this speed range. Conversely, Kuwait has now been included in this lower speed range.
- While average speed continues to climb (up from 40 Mb/s in 2017 to 45 Mb/s in 2018), the climb hasn't been as dramatic as in previous years, and this update has seen few introductions of higher speed services. This is unsurprising, as already in a number of countries, advertised speeds are already quite high.
- There were much fewer price changes than in the previous update. Where changes were made, they were generally, due to general portfolio changes. The more notable changes include:
  - Bahrain: A wider range of services is available from Batelco for residential users, including a number of 'Double Up' speed services, and bundled services.
  - Jordan increased the rental on some of its business services, but include a more favourable 3 month promotion compared to the last update
  - Pricing for broadband services in Kuwait has been included in the study for this update
  - Lebanon introduced a range of 50 Mbps fiber services, with download allowances ranging from 300GB to 1000GB per month.
  - Mauritania increased the speed of its 10 Mb/s ADSL services to 12 Mb/s , with no cost increase
  - Omantel extended its range of business offers to include higher speed services up to 300 Mb/s (previously the highest speed was 100 Mb/s)
  - Qatar changed the speed and price of some of its Fibre Home Broadband offers, with some services increasing in cost, and others decreasing
  - Etisalat (UAE) increased the speeds for its eLife double play packages, and introduced a range of internet only eLife services, ranging from 10-50 Mb/s.
  - In addition to these changes, both Saudi Arabia and UAE introduced VAT on residential services for the first time, at a rate of 5%,





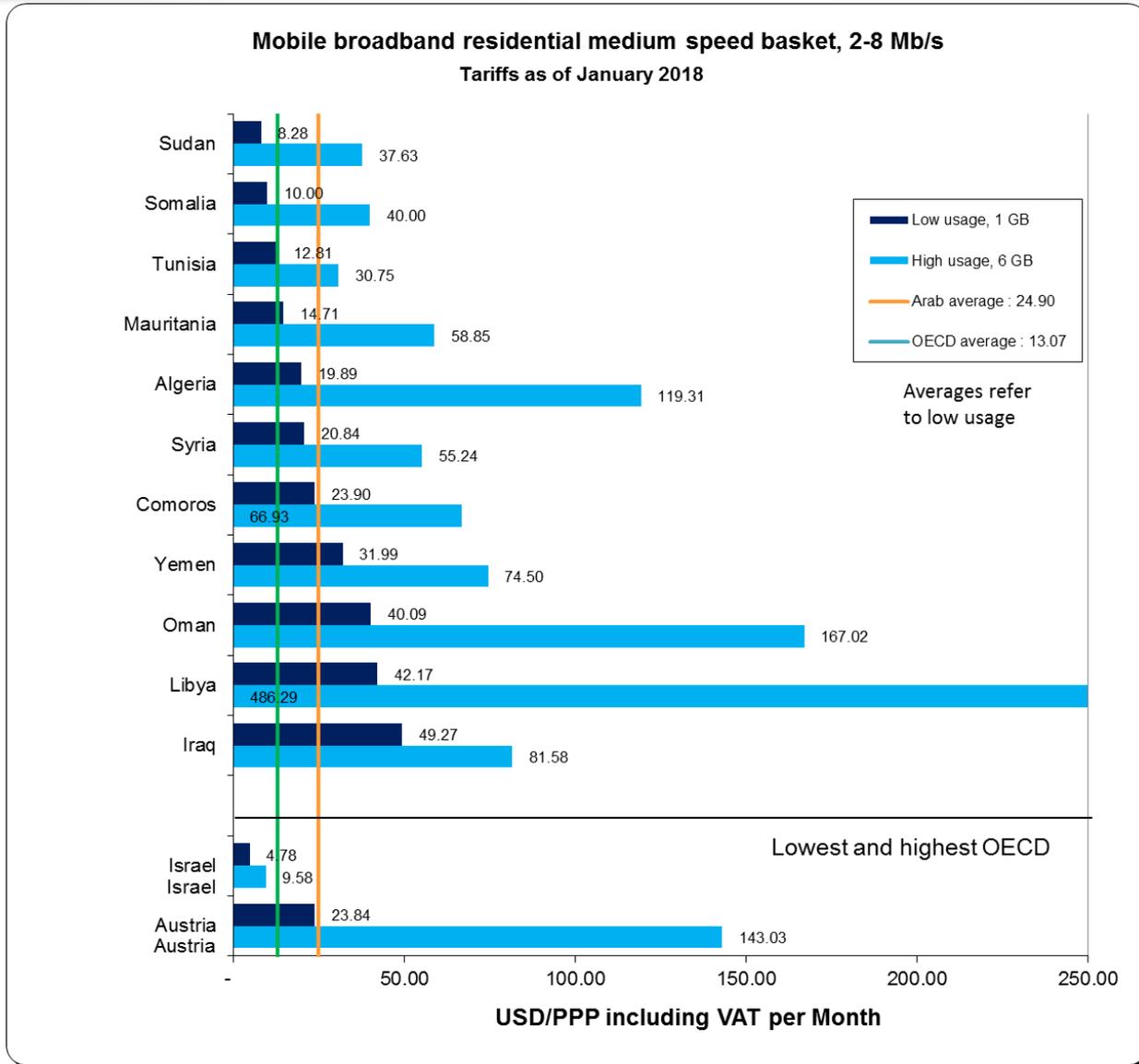
# MOBILE BROADBAND BASKET RESULTS 2018



# MOBILE BROADBAND DATA ISSUES

- Data collected refers to dedicated mobile broadband packages (i.e. not mobile broadband bundled with or added to mobile voice packages)
- Data was available for all countries, however, not all providers specify speeds of service, so results may not be available for some countries where a speed designation is applied to the basket.
- For countries where data was available, up to three operators were considered
- Total monthly cost calculated based on two usage baskets from the modified OECD baskets:
  - **Low usage:** 1 GB and 5 hours per month.
  - **High usage:** 6 GB and 30 hours per month.
  - Please note that the OECD baskets do not consider time (i.e. hours of usage). This has been added to avoid exclusion of any time related tariffs in this study.
- Two speeds were considered for each usage level:
  - **Medium speed:** 2-8 Mb/s
  - **High speed:** >8 Mb/s
  - Please note that the OECD baskets do not distinguish on speed, but rather includes all speeds above 256 Kb/s. The two speed ranges were included to be able to analyse developments in mobile broadband speeds.
- In addition, a calculation has been included for the same low and high usage levels, for both business and residential services, but not taking into account any speed limitations,
- This captures tariffs which are published but without any download speed information, and which would otherwise not have been considered for the analysis
  - This calculation is especially important for this update, as there are a lot more mobile broadband offers in the market, many of which do not specify the speed of service.
- Results were compared to the recent OECD results covering 35 OECD countries, using the same usage baskets described above
  - The new OECD baskets for mobile broadband were adopted in June 2012

# RESIDENTIAL MEDIUM SPEED MOBILE BROADBAND (2-8 MB/S)



**Low usage: 1 GB and 5 hours per month over 15 days**

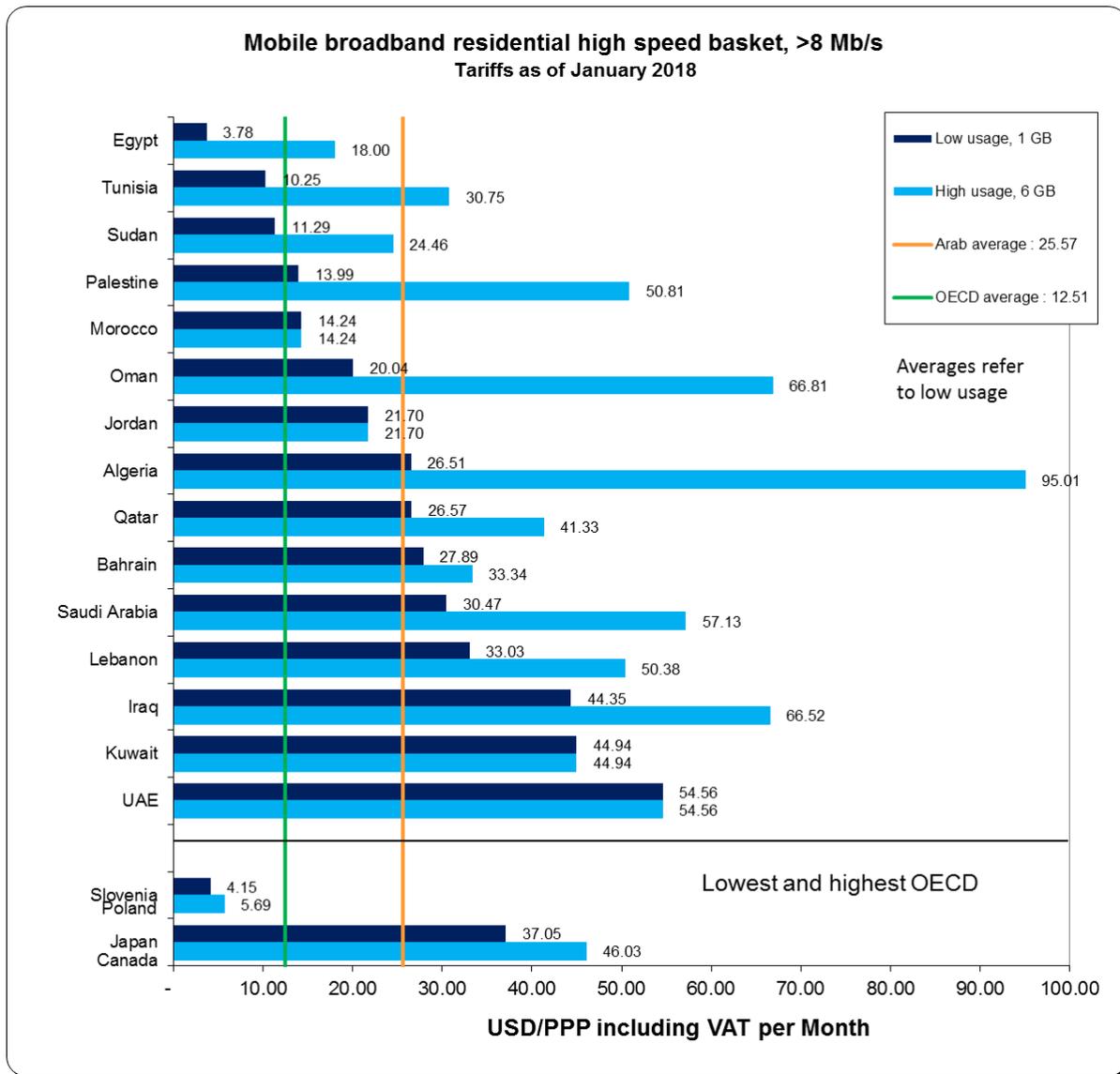
**High usage: 6 GB and 30 hours over 30 days**

**Average lines are based on low usage results**

**For high usage, some of the results have been truncated, to make the graph easier to read**



# RESIDENTIAL HIGH SPEED MOBILE BROADBAND (>8 MB/S)



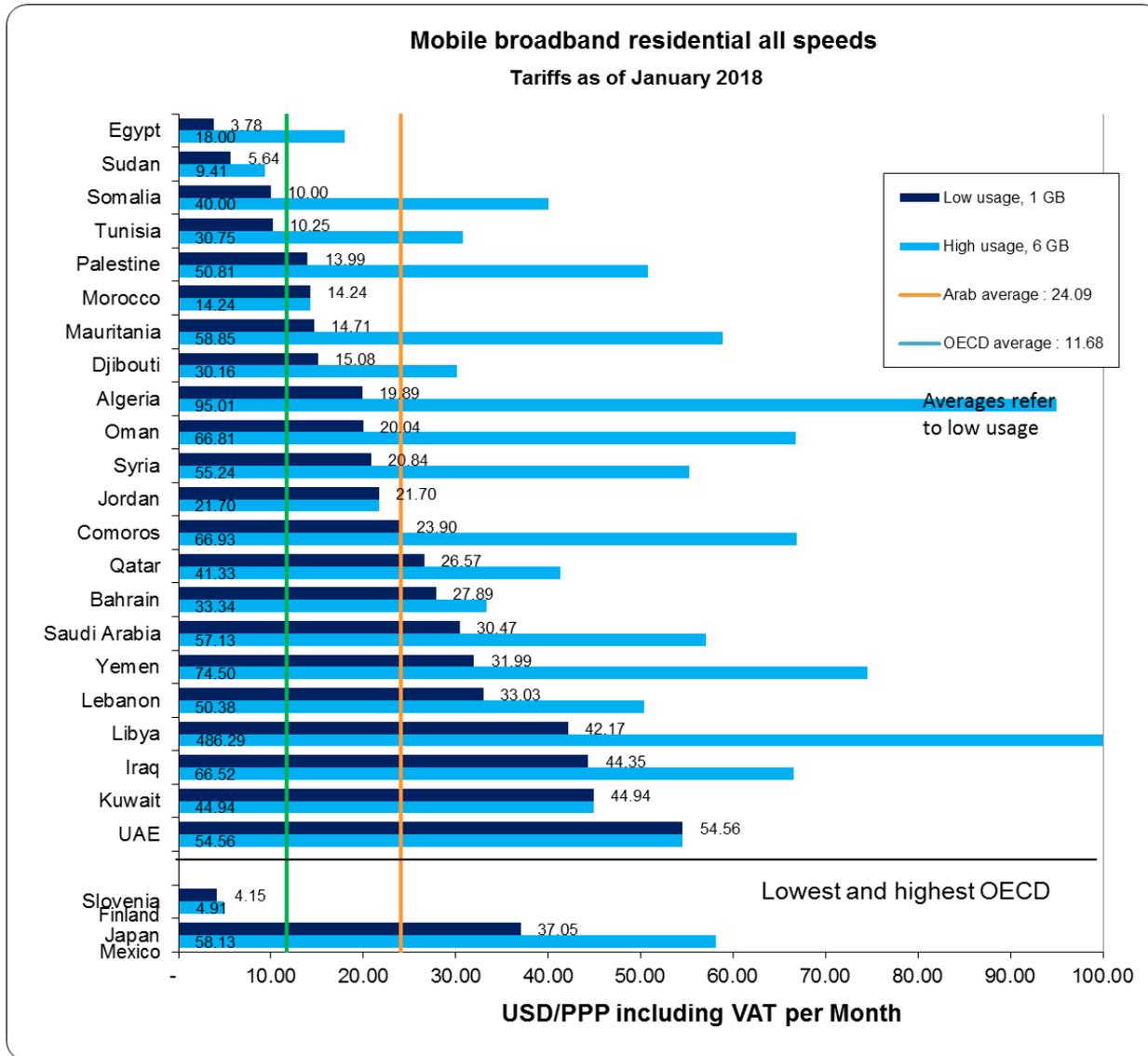
**Low usage: 1 GB and 5 hours per month over 15 days**

**High usage: 6 GB and 30 hours over 30 days**

**Average lines are based on low usage results**



# RESIDENTIAL MOBILE BROADBAND ALL SPEEDS



**Low usage: 1 GB and 5 hours per month over 15 days**

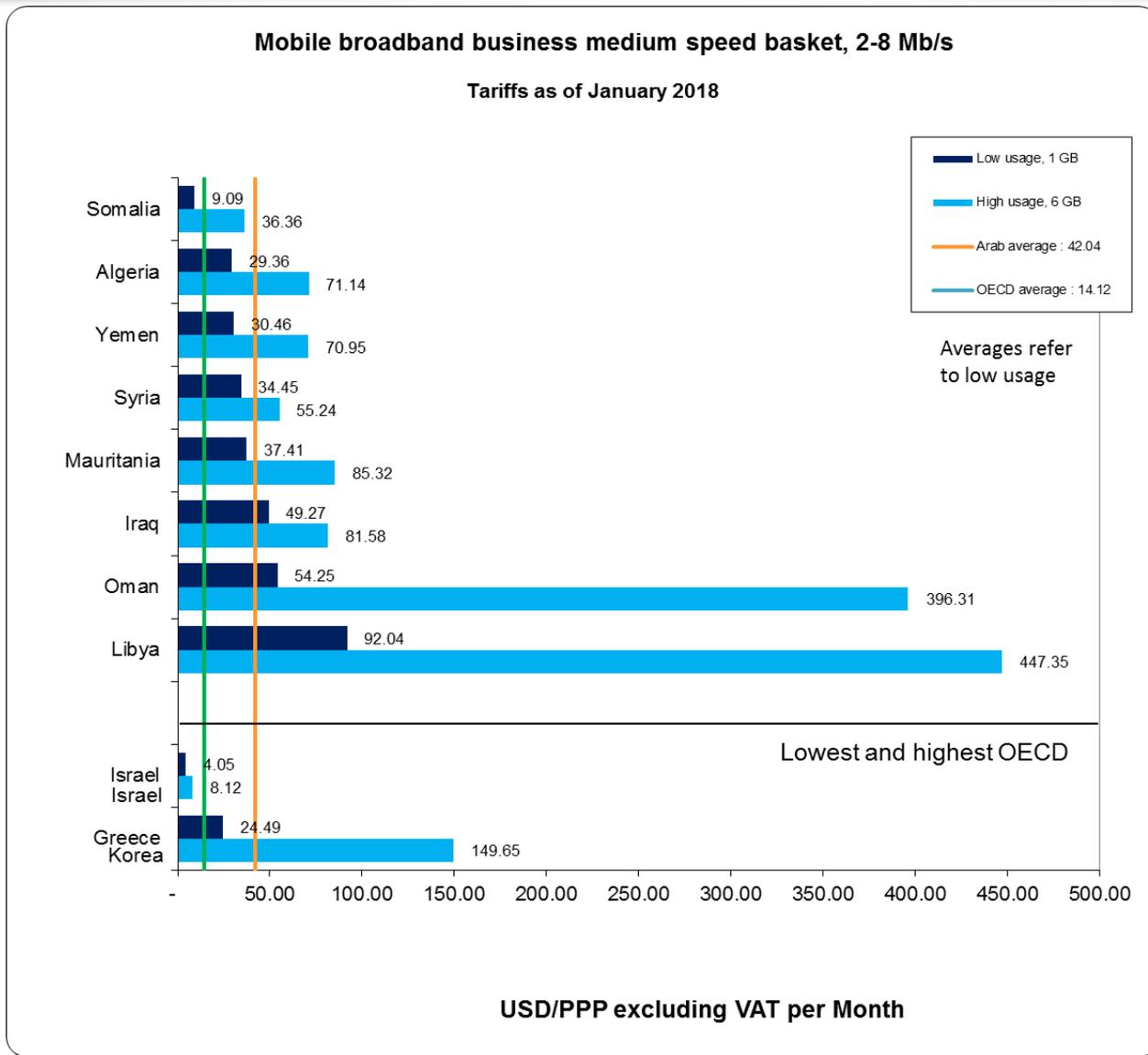
**High usage: 6 GB and 30 hours over 30 days**

**Average lines are based on low usage results**

**For high usage, some of the results have been truncated, to make the graph easier to read**



# BUSINESS MEDIUM SPEED MOBILE BROADBAND (2-8 MB/S)



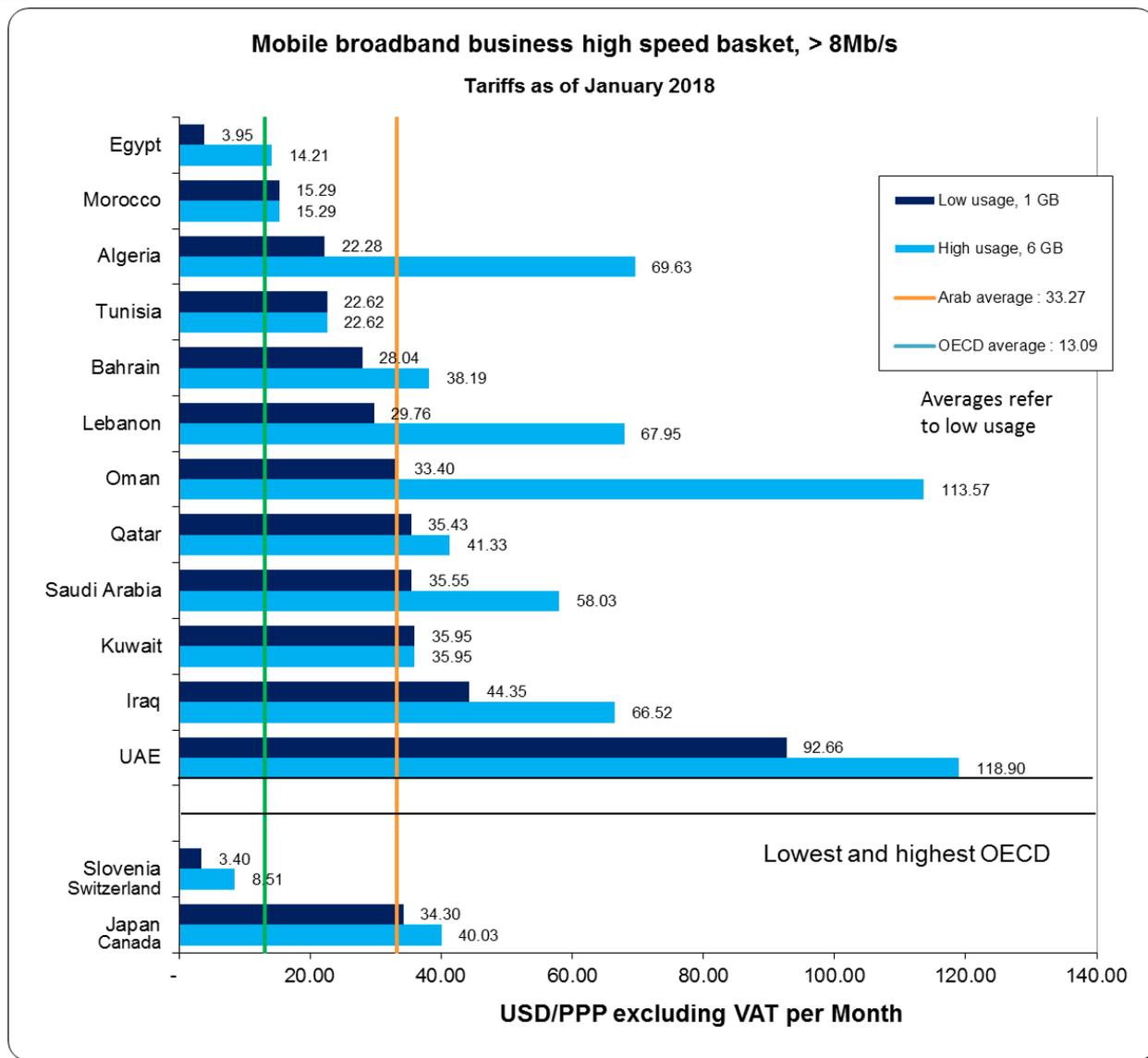
**Low usage: 1 GB  
and 5 hours per  
month over 15 days**

**High usage: 6 GB  
and 30 hours over  
30 days**

**Average lines are  
based on low usage  
results**



# BUSINESS HIGH SPEED MOBILE BROADBAND (>8 MB/S)



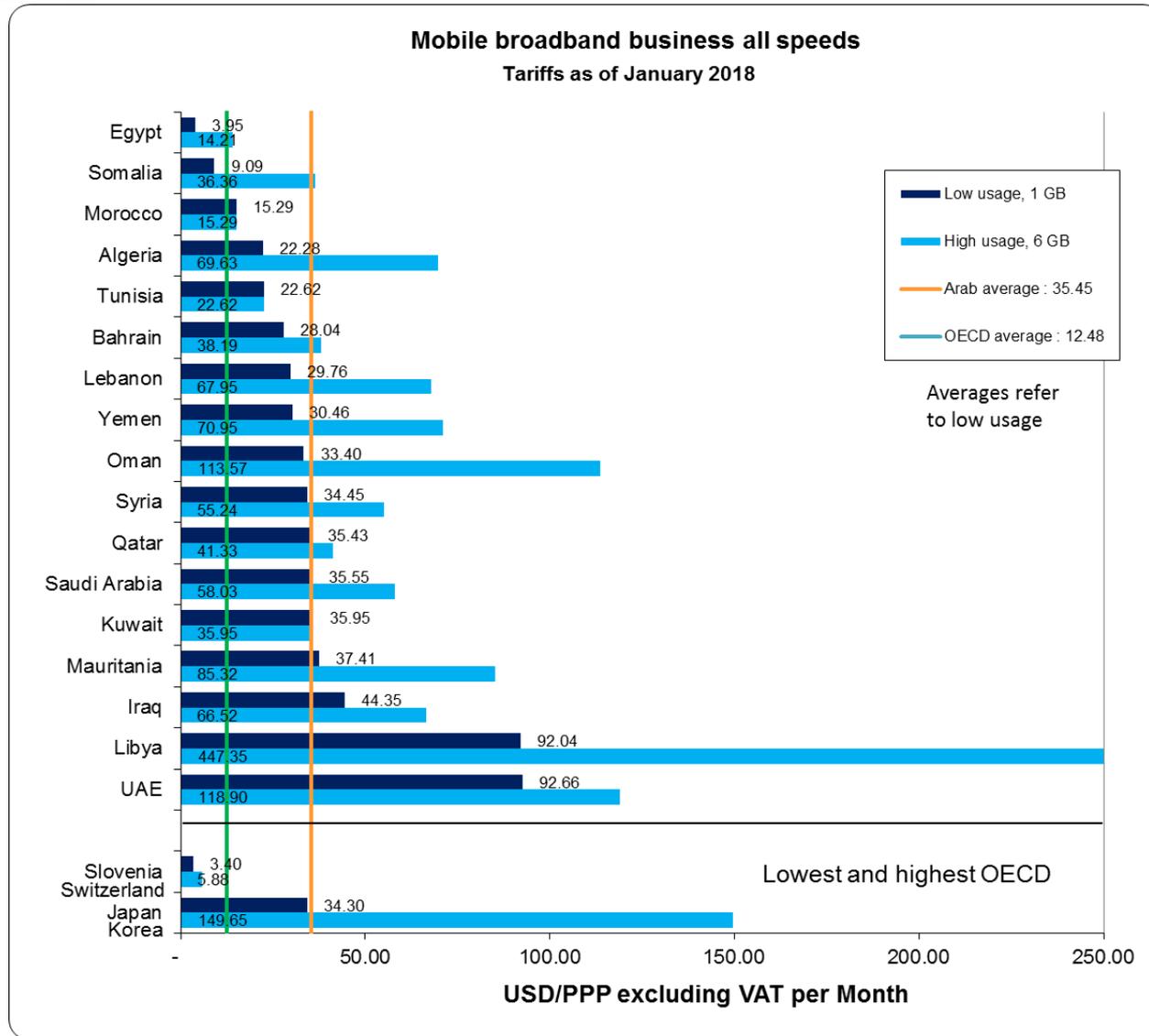
**Low usage: 1 GB and 5 hours per month over 15 days**

**High usage: 6 GB and 30 hours over 30 days**

**Average lines are based on low usage results**



# BUSINESS MOBILE BROADBAND ALL SPEEDS



**Low usage: 1 GB and 5 hours per month over 15 days**

**High usage: 6 GB and 30 hours over 30 days**

**Average lines are based on low usage results**

**For high usage, the results for Libya have been truncated, to make the graph easier to read**



# OBSERVATIONS FROM MOBILE BROADBAND BASKET RESULTS



- Mobile broadband services are available across all the Arab countries.
  - The average advertised download speed is just over 89 Mb/s, up from 86 Mb/s in 2017
  - Higher speeds increasingly commonplace, with speeds in excess of 7.2 Mb/s available in 15 of the Arab countries, and accounting for 83% of offers.
  - Very low speeds of < 1Mb/s are only available in Djibouti and Palestine, while 1 Mb/s services are only available in Sudan.
- The table below shows the 3 cheapest and 3 most expensive countries for each basket, each speed category, for both residential and business services.

		Cheapest			Most expensive		
		1st	2nd	3rd	1st	2nd	3rd
Residential	2-8 Mb/s low usage	Sudan	Somalia	Tunisia	Iraq	Libya	Oman
	2-8 Mb/s high usage	Tunisia	Sudan	Somalia	Libya	Oman	Algeria
	> 8 Mb/s low usage	Egypt	Tunisia	Sudan	UAE	Kuwait	Iraq
	> 8 Mb/s high usage	Morocco	Egypt	Jordan	Algeria	Oman	Iraq
	All speed low usage	Egypt	Sudan	Somalia	UAE	Kuwait	Iraq
	All speed high usage	Sudan	Morocco	Egypt	Libya	Algeria	Yemen
Business	2-8 Mb/s low usage	Somalia	Algeria	Yemen	Libya	Oman	Iraq
	2-8 Mb/s high usage	Somalia	Syria	Yemen	Libya	Oman	Mauritania
	> 8 Mb/s low usage	Egypt	Morocco	Algeria	UAE	Iraq	Kuwait
	> 8 Mb/s high usage	Egypt	Morocco	Tunisia	UAE	Oman	Algeria
	All speed low usage	Egypt	Somalia	Morocco	UAE	Libya	Iraq
	All speed high usage	Egypt	Morocco	Tunisia	Libya	UAE	Oman

- Generally, Egypt, Sudan, Somalia, Morocco and Tunisia are consistently the cheapest countries, for both residential and business services,, and irrespective of speed, and, notably, of usage. Oman, Iraq, Algeria, Kuwait and UAE are among the most expensive.
- The average cost of mobile broadband services for both residential and business customers in the Arab countries compared to the OECD average is shown in the table below.

Arab/OECD average	Low usage		High usage		Low usage	High usage
	2-8 Mb/s	> 8 Mb/s	2-8 Mb/s	> 8 Mb/s	All speeds	All speeds
Arab/OECD residential	1.91	2.04	2.53	1.97	2.06	3.01
Arab/OECD business	2.98	2.54	3.12	2.55	2.84	3.13

- The average varies according to which basket and speed is being considered, and whether the services are residential or business, but broadly, the residential Arab average is between 1.9 1and 3.01 times more than the OECD average.
- For business services, the Arab/OECD ratio is similar - between 2.54 and 3.13 times.
- The cost of mobile broadband in the Arab countries, although still generally 2.5 to 3 times the cost of mobile broadband in the OECD (average) is much more in line than in previous years.





# MOBILE BROADBAND TIME SERIES ANALYSIS AND RANKING TABLES 2013-2018

# RESIDENTIAL MEDIUM SPEED MOBILE BROADBAND (2-8 MB/S), LOW USAGE BASKET RANKING



	Basket 3: 1GB, Residential				
	2013	2015	2016	2017	2018
Algeria	67.94	22.10	20.80	19.89	19.89
Bahrain	16.37	22.13	22.13		
Comoros		35.85	35.85	23.90	23.90
Djibouti					
Egypt					
Iraq					49.27
Jordan	18.08				
Kuwait	44.94				
Lebanon					
Libya		42.17	42.17	42.17	42.17
Mauritania		44.14	44.14	14.71	14.71
Morocco	26.16				
Oman	33.40	40.09	40.09	40.09	40.09
Qatar					
Saudi Arabia	17.41	39.90	39.90		
Somalia			83.33	83.33	10.00
Sudan	9.78	5.64	7.53	8.28	8.28
Syria	7.62		11.39	20.84	20.84
Tunisia	20.64	12.81	19.22	12.81	12.81
UAE					
Yemen			40.49	31.99	31.99

	Basket 3: 1GB, Residential				
	2013	2015	2016	2017	2018
Algeria	10	3	4	4	5
Bahrain	3	4	5		
Comoros		5	6	6	7
Djibouti					
Egypt					
Iraq					11
Jordan	5				
Kuwait	9				
Lebanon					
Libya		8	10	9	10
Mauritania		9	11	3	4
Morocco	7				
Oman	8	7	8	8	9
Qatar					
Saudi Arabia	4	6	7		
Somalia			12	10	2
Sudan	2	1	1	1	1
Syria	1		2	5	6
Tunisia	6	2	3	2	3
UAE					
Yemen			9	7	8

Average	26.24	29.42	33.92	29.80	24.90
---------	-------	-------	-------	-------	-------

Below Arab average
Above Arab average

Least expensive
Most expensive



# RESIDENTIAL MEDIUM SPEED MOBILE BROADBAND (2-8 MB/S), HIGH USAGE BASKET RANKING



	Basket 6: 6GB, Residential				
	2013	2015	2016	2017	2018
Algeria	67.94	33.14	82.30	119.31	119.31
Bahrain	43.65	43.95	22.13		
Comoros		95.61	95.61	66.93	66.93
Djibouti					
Egypt					
Iraq					81.58
Jordan	43.03				
Kuwait	44.94				
Lebanon					
Libya		447.35	486.29	486.29	486.29
Mauritania		98.09	98.09	58.85	58.85
Morocco	28.78				
Oman	100.21	167.02	167.02	167.02	167.02
Qatar					
Saudi Arabia	100.11	119.69	119.69		
Somalia			233.33	233.33	40.00
Sudan	18.06	5.64	7.53	37.63	37.63
Syria	37.80		30.29	55.24	55.24
Tunisia	39.86	25.94	25.94	38.43	30.75
UAE					
Yemen			242.93	74.50	74.50

Average	52.44	115.16	134.26	133.75	110.74
---------	-------	--------	--------	--------	--------

Below Arab average
Above Arab average

	Basket 6: 6GB, Residential				
	2013	2015	2016	2017	2018
Algeria	8	3	5	7	9
Bahrain	6	4	2		
Comoros		5	6	5	6
Djibouti					
Egypt					
Iraq					8
Jordan	5				
Kuwait	7				
Lebanon					
Libya		9	12	10	11
Mauritania		6	7	4	5
Morocco	2				
Oman	10	8	9	8	10
Qatar					
Saudi Arabia	9	7	8		
Somalia			10	9	3
Sudan	1	1	1	1	2
Syria	3		4	3	4
Tunisia	4	2	3	2	1
UAE					
Yemen			11	6	7

Least expensive
Most expensive



# RESIDENTIAL HIGH SPEED MOBILE BROADBAND (>8 MB/S), LOW USAGE BASKET RANKING



	Basket 3: 1GB, Residential				
	2013	2015	2016	2017	2018
Algeria		39.44	33.14	26.51	26.51
Bahrain	16.37	16.37	16.37	27.89	27.89
Comoros					
Djibouti					
Egypt	4.50	4.50	4.50	5.40	3.78
Iraq		47.51	47.51	47.51	44.35
Jordan	65.09	18.08	18.08	16.27	21.70
Kuwait	26.96	26.96	26.96	44.94	44.94
Lebanon	56.16	36.88	20.29	29.76	33.03
Libya					
Mauritania					
Morocco	49.41	14.53	14.53	14.24	14.24
Oman	33.40	32.29	32.29	20.04	20.04
Qatar	48.06	14.76	14.76	26.57	26.57
Saudi Arabia	59.04	17.19	17.19	29.02	30.47
Somalia					
Sudan		11.29	11.29	11.29	11.29
Syria					
Tunisia	18.15	12.81	19.22	10.25	10.25
UAE	51.96	51.96	51.96	46.72	54.56
Yemen					

	Basket 3: 1GB, Residential				
	2013	2015	2016	2017	2018
Algeria		12	12	7	7
Bahrain	2	6	5	9	9
Comoros					
Djibouti					
Egypt	1	1	1	1	1
Iraq		13	13	14	12
Jordan	11	8	7	5	6
Kuwait	4	9	10	12	13
Lebanon	9	11	9	11	11
Libya					
Mauritania					
Morocco	7	4	3	4	4
Oman	5	10	11	6	5
Qatar	6	5	4	8	8
Saudi Arabia	10	7	6	10	10
Somalia					
Sudan		2	2	3	3
Syria					
Tunisia	3	3	8	2	2
UAE	8	14	14	13	14
Yemen					

Average	39.01	24.61	23.44	25.46	26.40
---------	-------	-------	-------	-------	-------

Below Arab average
Above Arab average

Least expensive
Most expensive



# RESIDENTIAL HIGH SPEED MOBILE BROADBAND (>8 MB/S), HIGH USAGE BASKET RANKING



	Basket 6: 6GB, Residential				
	2013	2015	2016	2017	2018
Algeria		314.86		87.45	95.01
Bahrain	49.10	38.19	32.74	33.34	33.34
Comoros					
Djibouti					
Egypt	18.00	18.00	18.00	13.50	18.00
Iraq		126.70	126.70	79.82	66.52
Jordan	65.09	21.70	21.70	21.70	21.70
Kuwait	71.90	62.92	44.94	53.93	44.94
Lebanon	189.88	94.70	56.91	50.38	50.38
Libya					
Mauritania					
Morocco	49.41	26.16	26.16	14.24	14.24
Oman	113.57	113.57	113.57	66.81	66.81
Qatar	59.87	41.33	41.33	41.33	41.33
Saudi Arabia	59.04	39.47	39.47	72.54	57.13
Somalia					
Sudan		19.76	22.58	24.46	24.46
Syria					
Tunisia	24.55	24.16	25.62	30.75	30.75
UAE	209.96	79.54	105.78	68.09	54.56
Yemen					

	Basket 6: 6GB, Residential				
	2013	2015	2016	2017	2018
Algeria		14		14	14
Bahrain	3	6	6	6	6
Comoros					
Djibouti					
Egypt	1	1	1	1	2
Iraq		13	13	13	12
Jordan	7	3	2	3	3
Kuwait	8	9	9	9	8
Lebanon	10	11	10	8	9
Libya					
Mauritania					
Morocco	4	5	5	2	1
Oman	9	12	12	10	13
Qatar	6	8	8	7	7
Saudi Arabia	5	7	7	12	11
Somalia					
Sudan		2	3	4	4
Syria					
Tunisia	2	4	4	5	5
UAE	11	10	11	11	10
Yemen					

Least expensive  
Most expensive



Average	82.76	72.93	51.96	47.02	44.23
---------	-------	-------	-------	-------	-------

Below Arab average  
Above Arab average

# RESIDENTIAL MOBILE BROADBAND (ALL SPEEDS), LOW USAGE BASKET RANKING



	Basket 3: 1GB, Residential				
	2013	2015	2016	2017	2018
Algeria	67.94	22.10	20.80	19.89	19.89
Bahrain	16.37	16.37	16.37	27.89	27.89
Comoros	35.85	35.85	35.85	23.90	23.90
Djibouti	15.08	15.08	15.08	15.08	15.08
Egypt	3.60	4.50	4.50	5.40	3.78
Iraq	38.01	47.51	47.51	47.51	44.35
Jordan	9.04	18.08	18.08	16.27	21.70
Kuwait	26.96	26.96	26.96	44.94	44.94
Lebanon	56.16	36.88	20.29	29.76	33.03
Libya		42.17	42.17	42.17	42.17
Mauritania		44.14	44.14	14.71	14.71
Morocco	26.16	14.53	14.53	14.24	14.24
Oman	33.40	32.29	32.29	20.04	20.04
Qatar	48.06	14.76	14.76	26.57	26.57
Saudi Arabia	17.41	17.19	17.19	29.02	30.47
Somalia			83.33	83.33	10.00
Sudan	9.78	4.23	4.29	5.64	5.64
Syria	7.62		11.39	20.84	20.84
Tunisia	18.15	12.81	19.22	10.25	10.25
UAE	51.96	51.96	51.96	46.72	54.56
Yemen			40.49	31.99	31.99

Average	28.33	25.41	27.68	27.44	24.57
---------	-------	-------	-------	-------	-------

Below Arab average
Above Arab average

	Basket 3: 1GB, Residential				
	2013	2015	2016	2017	2018
Algeria	17	10	12	8	8
Bahrain	6	7	7	13	14
Comoros	12	13	15	11	12
Djibouti	5	6	6	6	7
Egypt	1	2	2	1	1
Iraq	13	17	19	20	19
Jordan	3	9	9	7	11
Kuwait	10	11	13	18	20
Lebanon	16	14	11	15	17
Libya		15	17	17	18
Mauritania		16	18	5	6
Morocco	9	4	4	4	5
Oman	11	12	14	9	9
Qatar	14	5	5	12	13
Saudi Arabia	7	8	8	14	15
Somalia			21	21	3
Sudan	4	1	1	2	2
Syria	2		3	10	10
Tunisia	8	3	10	3	4
UAE	15	18	20	19	21
Yemen			16	16	16

Least expensive
Most expensive



# RESIDENTIAL MOBILE BROADBAND (ALL SPEEDS), HIGH USAGE BASKET RANKING



	Basket 6: 6GB, Residential				
	2013	2015	2016	2017	2018
Algeria	67.94	33.14	82.30	87.45	95.01
Bahrain	43.65	38.19	22.13	33.34	33.34
Comoros	95.61	95.61	95.61	66.93	66.93
Djibouti	60.33	60.33	60.33	30.16	30.16
Egypt	18.00	18.00	18.00	13.50	18.00
Iraq	38.01	126.70	126.70	79.82	66.52
Jordan	21.70	21.70	21.70	21.70	21.70
Kuwait	44.94	62.92	44.94	53.93	44.94
Lebanon	189.88	94.70	56.91	50.38	50.38
Libya		447.35	486.29	486.29	486.29
Mauritania		98.09	98.09	58.85	58.85
Morocco	28.78	26.16	26.16	14.24	14.24
Oman	100.21	113.57	113.57	66.81	66.81
Qatar	59.87	41.33	41.33	41.33	41.33
Saudi Arabia	59.04	39.47	39.47	72.54	57.13
Somalia			233.33	233.33	40.00
Sudan	18.06	5.64	7.53	9.41	9.41
Syria	37.80		30.29	55.24	55.24
Tunisia	24.55	24.16	25.62	30.75	30.75
UAE	209.96	79.54	105.78	68.09	54.56
Yemen			242.93	74.50	74.50

Average	65.78	79.26	94.24	78.50	67.43
---------	-------	-------	-------	-------	-------

Below Arab average
Above Arab average

	Basket 6: 6GB, Residential				
	2013	2015	2016	2017	2018
Algeria	13	6	13	19	20
Bahrain	8	7	4	7	7
Comoros	14	14	14	14	18
Djibouti	12	10	12	5	5
Egypt	1	2	2	2	3
Iraq	7	17	18	18	16
Jordan	3	3	3	4	4
Kuwait	9	11	10	10	10
Lebanon	16	13	11	9	11
Libya		18	21	21	21
Mauritania		15	15	12	15
Morocco	5	5	6	3	2
Oman	15	16	17	13	17
Qatar	11	9	9	8	9
Saudi Arabia	10	8	8	16	14
Somalia			19	20	8
Sudan	2	1	1	1	1
Syria	6		7	11	13
Tunisia	4	4	5	6	6
UAE	17	12	16	15	12
Yemen			20	17	19

Least expensive
Most expensive



# BUSINESS MEDIUM SPEED MOBILE BROADBAND (2-8 MB/S), LOW USAGE BASKET RANKING



**Basket 3: 1GB, Business**

	2013	2015	2016	2017	2018
Algeria	57.09	27.85	27.85	29.36	29.36
Bahrain	21.82	22.13			
Comoros					
Djibouti					
Egypt					
Iraq					49.27
Jordan					
Kuwait	44.94				
Lebanon					
Libya			92.04	92.04	92.04
Mauritania		37.41	37.41	37.41	37.41
Morocco					
Oman	33.40	54.25	54.25	54.25	54.25
Qatar					
Saudi Arabia	68.30		199.37		
Somalia			75.76	75.76	9.09
Sudan			6.27		
Syria	15.12		18.95	34.45	34.45
Tunisia		21.98	21.98		
UAE		72.49	72.49	124.47	
Yemen				30.46	30.46

Average	40.11	39.35	60.64	59.78	42.04
---------	-------	-------	-------	-------	-------

Below Arab average
Above Arab average

**Basket 3: 1GB, Business**

	2013	2015	2016	2017	2018
Algeria	5	3	4	1	2
Bahrain	2	2			
Comoros					
Djibouti					
Egypt					
Iraq					6
Jordan					
Kuwait	4				
Lebanon					
Libya			9	7	8
Mauritania		4	5	4	5
Morocco					
Oman	3	5	6	5	7
Qatar					
Saudi Arabia	6		10		
Somalia			8	6	1
Sudan			1		
Syria	1		2	3	4
Tunisia		1	3		
UAE		6	7	8	
Yemen				2	3

Least expensive
Most expensive



# BUSINESS MEDIUM SPEED MOBILE BROADBAND (2-8 MB/S), HIGH USAGE BASKET RANKING



	Basket 6: 6GB, Business				
	2013	2015	2016	2017	2018
Algeria	57.09	139.26	139.26	71.14	71.14
Bahrain	43.65	43.95			
Comoros					
Djibouti					
Egypt					
Iraq					81.58
Jordan					
Kuwait	89.88				
Lebanon					
Libya			447.35	447.35	447.35
Mauritania		83.12	83.12	85.32	85.32
Morocco					
Oman	113.57	396.31	396.31	396.31	396.31
Qatar					
Saudi Arabia	68.30		199.37		
Somalia			212.12	212.12	36.36
Sudan			8.64		
Syria	22.68		30.29	55.24	55.24
Tunisia		21.98	21.98		
UAE		197.46	197.46	197.46	
Yemen				70.95	70.95

	Basket 6: 6GB, Business				
	2013	2015	2016	2017	2018
Algeria	3	4	5	3	4
Bahrain	2	2			
Comoros					
Djibouti					
Egypt					
Iraq					5
Jordan					
Kuwait	5				
Lebanon					
Libya			10	8	8
Mauritania		3	4	4	6
Morocco					
Oman	6	6	9	7	7
Qatar					
Saudi Arabia	4		7		
Somalia			8	6	1
Sudan			1		
Syria	1		3	1	2
Tunisia		1	2		
UAE		5	6	5	
Yemen				2	3

Least expensive  
Most expensive



Average	65.86	147.01	173.59	191.99	155.53
---------	-------	--------	--------	--------	--------

Below Arab average  
Above Arab average

# BUSINESS HIGH SPEED MOBILE BROADBAND (>8 MB/S), LOW USAGE BASKET RANKING



	Basket 3: 1GB, Business				
	2013	2015	2016	2017	2018
Algeria		27.85	27.85	22.28	22.28
Bahrain	28.04	28.04	28.04	28.04	28.04
Comoros					
Djibouti					
Egypt	3.95	3.95	3.95	3.95	3.95
Iraq		47.51	47.51	47.51	44.35
Jordan			93.21		
Kuwait	170.77	44.94	44.94	215.71	35.95
Lebanon	43.04	26.49	28.28	25.33	29.76
Libya					
Mauritania					
Morocco		29.07	23.98	15.29	15.29
Oman	33.40	33.40	33.40	33.40	33.40
Qatar	29.52	36.25	30.34	41.33	35.43
Saudi Arabia	42.92	35.55	35.55	35.55	35.55
Somalia					
Sudan			8.36		
Syria					
Tunisia	25.63	22.62	22.62	22.62	22.62
UAE	79.54	32.30	46.06	92.66	92.66
Yemen					

Average	50.76	30.66	33.86	48.64	33.27
---------	-------	-------	-------	-------	-------

Below Arab average
Above Arab average

	Basket 3: 1GB, Business				
	2013	2015	2016	2017	2018
Algeria		4	5	3	3
Bahrain	3	5	6	6	5
Comoros					
Djibouti					
Egypt	1	1	1	1	1
Iraq		12	13	10	11
Jordan			14		
Kuwait	9	11	11	12	10
Lebanon	7	3	7	5	6
Libya					
Mauritania					
Morocco		6	4	2	2
Oman	5	8	9	7	7
Qatar	4	10	8	9	8
Saudi Arabia	6	9	10	8	9
Somalia					
Sudan			2		
Syria					
Tunisia	2	2	3	4	4
UAE	8	7	12	11	12
Yemen					

Least expensive
Most expensive



# BUSINESS HIGH SPEED MOBILE BROADBAND (>8 MB/S), HIGH USAGE BASKET RANKING



	Basket 6: 6GB, Business				
	2013	2015	2016	2017	2018
Algeria		97.48	97.48	69.63	69.63
Bahrain	54.56	38.19	32.74	38.19	38.19
Comoros					
Djibouti					
Egypt	15.79	14.21	14.21	14.21	14.21
Iraq		126.70	126.70	79.82	66.52
Jordan			93.21		
Kuwait	170.77	71.90	71.90	215.71	35.95
Lebanon	102.07	68.30	72.55	57.80	67.95
Libya					
Mauritania					
Morocco		29.07	23.98	15.29	15.29
Oman	113.57	113.57	113.57	113.57	113.57
Qatar	59.05	59.05	41.33	41.33	41.33
Saudi Arabia	42.92	106.64	58.03	58.03	58.03
Somalia					
Sudan			11.85		
Syria					
Tunisia	25.63	22.62	22.62	22.62	22.62
UAE	79.54	66.41	80.18	118.90	118.90
Yemen					

	Basket 6: 6GB, Business				
	2013	2015	2016	2017	2018
Algeria		9	12	8	10
Bahrain	4	4	5	4	5
Comoros					
Djibouti					
Egypt	1	1	2	1	1
Iraq		12	14	9	8
Jordan			11		
Kuwait	9	8	8	12	4
Lebanon	7	7	9	6	9
Libya					
Mauritania					
Morocco		3	4	2	2
Oman	8	11	13	10	11
Qatar	5	5	6	5	6
Saudi Arabia	3	10	7	7	7
Somalia					
Sudan			1		
Syria					
Tunisia	2	2	3	3	3
UAE	6	6	10	11	12
Yemen					

Average	73.77	67.85	61.45	70.43	55.18
---------	-------	-------	-------	-------	-------

Below Arab average  
Above Arab average

Least expensive  
Most expensive



# BUSINESS MOBILE BROADBAND (ALL SPEEDS), LOW USAGE BASKET RANKING



**Basket 3: 1GB, Business**

	2013	2015	2016	2017	2018
Algeria	57.09	27.85	27.85	22.28	22.28
Bahrain	21.82	22.13	28.04	28.04	28.04
Comoros					
Djibouti	153.61	153.61	153.61	153.61	
Egypt	3.95	3.95	3.95	3.95	3.95
Iraq		47.51	47.51	47.51	44.35
Jordan			93.21		
Kuwait	44.94	44.94	44.94	215.71	35.95
Lebanon	43.04	26.49	28.28	25.33	29.76
Libya			92.04	92.04	92.04
Mauritania		37.41	37.41	37.41	37.41
Morocco		29.07	23.98	15.29	15.29
Oman	33.40	33.40	33.40	33.40	33.40
Qatar	29.52	36.25	30.34	41.33	35.43
Saudi Arabia	42.92	35.55	35.55	35.55	35.55
Somalia			75.76	75.76	9.09
Sudan			3.14		
Syria	15.12		18.95	34.45	34.45
Tunisia	25.63	21.98	21.98	22.62	22.62
UAE	79.54	32.30	46.06	92.66	92.66
Yemen				30.46	30.46

Average	45.88	39.46	44.53	55.97	35.45
---------	-------	-------	-------	-------	-------

Below Arab average  
Above Arab average

**Basket 3: 1GB, Business**

	2013	2015	2016	2017	2018
Algeria	10	5	6	3	4
Bahrain	3	3	7	6	6
Comoros					
Djibouti	12	14	19	17	
Egypt	1	1	2	1	1
Iraq		13	15	13	15
Jordan			18		
Kuwait	9	12	13	18	13
Lebanon	8	4	8	5	7
Libya			17	15	16
Mauritania		11	12	11	14
Morocco		6	5	2	3
Oman	6	8	10	8	9
Qatar	5	10	9	12	11
Saudi Arabia	7	9	11	10	12
Somalia			16	14	2
Sudan			1		
Syria	2		3	9	10
Tunisia	4	2	4	4	5
UAE	11	7	14	16	17
Yemen				7	8

Least expensive  
Most expensive



# BUSINESS MOBILE BROADBAND (ALL SPEEDS), HIGH USAGE BASKET RANKING



**Basket 6: 6GB, Business**

	2013	2015	2016	2017	2018
Algeria	57.09	97.48	97.48	69.63	69.63
Bahrain	43.65	38.19	32.74	38.19	38.19
Comoros					
Djibouti	153.61	153.61	153.61	153.61	
Egypt	3.95	14.21	14.21	14.21	14.21
Iraq		126.70	126.70	79.82	66.52
Jordan			93.21		
Kuwait	89.88	71.90	71.90	215.71	35.95
Lebanon	102.07	68.30	72.55	57.80	67.95
Libya			447.35	447.35	447.35
Mauritania		83.12	83.12	85.32	85.32
Morocco		29.07	23.98	15.29	15.29
Oman	113.57	113.57	113.57	113.57	113.57
Qatar	59.05	59.05	41.33	41.33	41.33
Saudi Arabia	42.92	71.72	58.03	58.03	58.03
Somalia			212.12	212.12	36.36
Sudan			4.46		
Syria	22.68		30.29	55.24	55.24
Tunisia	25.63	21.98	21.98	22.62	22.62
UAE	79.54	66.41	80.18	118.90	118.90
Yemen				70.95	70.95

**Basket 6: 6GB, Business**

	2013	2015	2016	2017	2018
Algeria	6	11	14	9	12
Bahrain	5	4	6	4	6
Comoros					
Djibouti	12	14	17	15	
Egypt	1	1	2	1	1
Iraq		13	16	11	10
Jordan			13		
Kuwait	9	9	9	17	4
Lebanon	10	7	10	7	11
Libya			19	18	17
Mauritania		10	12	12	14
Morocco		3	4	2	2
Oman	11	12	15	13	15
Qatar	7	5	7	5	7
Saudi Arabia	4	8	8	8	9
Somalia			18	16	5
Sudan			1		
Syria	2		5	6	8
Tunisia	3	2	3	3	3
UAE	8	6	11	14	16
Yemen				10	13

Average	66.14	72.52	93.62	103.87	79.85
---------	-------	-------	-------	--------	-------

Below Arab average
Above Arab average

Least expensive
Most expensive



# OBSERVATIONS FROM MOBILE BROADBAND TIME SERIES RESULTS



- There have been price and service changes from most of the Arab providers since 2017, with revisions of portfolios, increases in speed offerings, and increases in data allowances. The table below shows the overall shift in the Arab average for each basket and speed category, for both residential and business services

2017-2018	Residential	Business
2-8 Mb/s low usage	↓	↓
2-8 Mb/s high usage	↓	↓
> 8 Mb/s low usage	↑	↓
> 8 Mb/s high usage	↓	↓
All speed low usage	↓	↓
All speed high usage	↓	↓

- In contrast to previous years, the price changes both residential and business services are much more modest, and in many cases, there were no changes
- For residential services, based on all speeds:
  - Medium speed services were introduced in Iraq; by contrast, services in the speed range 2-8 Mb/s are no longer available in UAE
  - There was a large reduction for the cost of medium speed services in Somalia, as a result of a move away from very small data allowances to allowances that are much more in line with the baskets.
  - For high speed services, low usage, costs in Egypt were reduced, while in Jordan and Lebanon they increased.
  - By contrast, for high usage, costs in Egypt increased, while in other countries – Iraq, Kuwait, Saudi Arabia, UAE, they fell.
- For business services:
  - Medium speed services were introduced in Iraq; by contrast, services in the speed range 2-8 Mb/s are no longer available in UAE
  - Similar to residential services, there was a large reduction for the cost of medium speed services in Somalia, as a result of a move away from very small data allowances to allowances that are much more in line with the baskets
  - For high speed services, low usage, costs in Iraq were reduced, while in Lebanon and UAE they increased.
  - In Kuwait, the cost of business services have fallen sharply. In 2017, the only published offering was a package with a very high allowance (and corresponding high cost) – other offers were not published. Additional, lower allowance and lower cost services have since been published, and have been included this year.





# SUMMARY OF THE MAIN FINDINGS FROM THE BENCHMARKING STUDY

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: FIXED VOICE TELEPHONY (1)



- The cheapest and most expensive countries throughout are:

	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd
20 calls residential	Egypt	Djibouti	Sudan	Saudi Arabia	Mauritania	Kuwait
60 calls residential	Egypt	Djibouti	Tunisia	Mauritania	Saudi Arabia	Oman
140 calls residential	Egypt	Morocco	Djibouti	Mauritania	Saudi Arabia	Oman
420 calls residential	Egypt	Tunisia	Morocco	Mauritania	Lebanon	Palestine
100 calls business	Djibouti	Tunisia	Lebanon	Mauritania	Saudi Arabia	UAE
260 calls business	Tunisia	Djibouti	Jordan	Mauritania	Oman	Saudi Arabia

- For low to medium residential usage (20 and 60 calls), most countries are either below the OECD average, or are on par with it. Consequently, at this level of usage, the Arab average is below that of the OECD.
- For higher residential usage – 140 calls and 420 calls, the balance shifts, however, the Arab average is still broadly on par with the OECD average. As in previous years, the results for Mauritania have been excluded from the Arab average (for the 60 calls basket upwards), as these negatively distort the average. With Mauritania excluded, the higher use baskets, while still higher than the OECD average, are not significantly so, but rather are much more closely aligned with it.
- Costs for the business baskets in the Arab countries vary, depending on usage, but once again, due to the especially high costs in Mauritania, this has been excluded from the Arab average. For the lower use basket – 100 calls/month, over half of the Arab countries are either lower or on par with the OECD average, with the Arab average around 26% higher than the OECD average. For higher usage – the 260 calls basket - the Arab average is 70% higher than that of the OECD average.
- As in 2017, a number of the Arab countries in North Africa are cheaper than those in the Middle East.
- A number of Arab countries continue to have fixed costs well below the OECD countries, causing the usage element to dominate. This makes the overall cost grow quicker with increasing usage, something that will discourage growth in usage. In some Arab countries, however, both fixed and usage costs are much higher than OECD countries.
- International calls remain significantly more expensive than in OECD countries
- Saudi Arabia and UAE have now applied 5% VAT to residential telecoms services

\* Countries with gaps in the tariff information are not considered.

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: FIXED VOICE TELEPHONY (2)



		Arab average 2018 USD PPP	OECD average 2018 USD PPP	Arab average compared to OECD average
<b>Fixed voice Residential</b>	20 calls	22	27	-20%
	60 calls	34	37	-8%
	140 calls	59	51	14%
	420 calls	85	73	16%
<b>Fixed voice Business</b>	100 calls	46	37	26%
	260 calls	116	68	70%

Due to the extremely high cost of PSTN services in Mauritania, and its distorting effect on the Arab average, the results for Mauritania have been excluded from the Arab average for all but the Residential 20 calls basket

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: MOBILE VOICE TELEPHONY (1)



- There is a clear correlation between the size of the basket (in terms of number of calls and volume of data), and the extent to which countries fall below the OECD average. For smaller baskets, more countries fall below the OECD average
  - For the lower use voice only or voice and data baskets, e.g. 30 calls, 100 calls, 40 calls prepaid, 400 message and 30 calls + 100 MB and 100 calls + 500 MB baskets, between 5 and 13 Arab countries have price levels either below or on par with the OECD average.
  - This number steadily declines as the number of calls and the data volume increases.
- The average result for the Arab providers is consistently higher than the OECD provider average across all mobile voice baskets, and the larger the basket the greater the variation.
- Baskets which incorporate handset data show a broad variation in price across the Arab providers – the difference becoming more marked for baskets with higher data requirements, indicating that in a number of countries, high mobile data use is still prohibitively expensive, and consequently, mobile data use is probably more limited.
- Similar to the voice baskets, the Arab provider average for the data baskets is typically much higher than the OECD one, although this is very much skewed by particularly expensive countries at the upper end.
- Where data costs are shown on the graph, these refer to overage charges or data add-on packages, rather than data included in the basic voice tariff. Where overage charges are higher, this indicates a limited range of data options, and mobile handset data services are much less well established, and are geared only towards very modest use. Over time, these costs should fall significantly, as mobile data use becomes more commonplace, and operators offer more competitively priced tariffs with more data included.
- The average number of tariff packages offered by the Arab operators is down slightly from 26 per operator in 2017, to 24 per operator in 2018.
- There has been a mix of decreases and increases over the period 2017 to 2018, presenting a much more stable picture than that of the 2017 report, which saw much greater declines. In part this is due to the relatively short time between this and the previous report, but also, it reflects a period of consolidation for some providers, at least, after the large reductions seen between 2016 and 2017.
- The table on the next slide shows the cheapest and most expensive 3 countries for each basket, while the table on the second to next slide shows a comparison of the Arab averages for each basket, against the OECD averages

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: MOBILE VOICE TELEPHONY (2)



- The cheapest and most expensive countries, based on the cheapest result per country, are:

	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd
30 calls	Egypt	Sudan	Syria	Bahrain	Kuwait	Algeria
100 calls	Egypt	Djibouti	Sudan	Kuwait	Bahrain	Iraq
300 calls	Egypt	Djibouti	Sudan	Kuwait	Iraq	Lebanon
900 calls	Egypt	Djibouti	Jordan	Mauritania	Lebanon	Comoros
40 calls prepaid	Sudan	Egypt	Djibouti	Bahrain	Algeria	Kuwait
400 messages	Egypt	Somalia	Syria	Saudi Arabia	Bahrain	Iraq
30 calls + 100 MB	Sudan	Egypt	Tunisia	Iraq	Kuwait	Bahrain
100 calls + 500 MB	Egypt	Sudan	Tunisia	Syria	Iraq	Kuwait
300 calls + 1 GB	Egypt	Jordan	Morocco	Syria	Iraq	Kuwait
900 calls + 2 GB	Egypt	Jordan	Morocco	Mauritania	Syria	Lebanon
100 calls + 2 GB	Egypt	Morocco	Sudan	Syria	Palestine	Iraq

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: MOBILE VOICE TELEPHONY (3)



		Arab average 2018 USD PPP	OECD average 2018 USD PPP	Arab average compared to OECD average
<b>Mobile voice</b>	30 calls basket	22	15	● 48%
	100 calls basket	41	21	● 97%
	300 calls basket	88	30	● 198%
	900 calls basket	213	37	● 477%
	40 calls prepaid basket	22	15	● 46%
	400 messages basket	34	18	● 88%
<b>Mobile voice &amp; data</b>	30 calls + 100 MB	31	18	● 75%
	100 calls + 500 MB	56	25	● 126%
	300 calls + 1 GB	113	33	● 241%
	900 calls + 2 GB	260	42	● 514%
	100 calls + 2 GB	94	30	● 208%

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: LEASED LINES



- The table below shows a summary of the cheapest and most expensive countries for each basket.

	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd
64 kb/s	Sudan	Tunisia	Bahrain	Mauritania	Oman	UAE
256 kb/s	Sudan	Tunisia	Bahrain	UAE	Mauritania	Oman
2 Mb/s	Lebanon	Kuwait	Sudan	Mauritania	Bahrain	Oman
34 Mb/s*	Lebanon	Algeria	UAE	Oman		
155 Mb/s*	Lebanon	Algeria	UAE	Oman		

\* Offers only available from 4 countries

- Leased line prices have been generally stable since 2012, with no change to most of the operator prices – the exceptions are Algeria and Lebanon, which both made changes to prices. In addition, Lebanon stopped publishing prices for 64 Kb/s and 256 Kb/s circuits, but now publishes 34 Mb/s and 155 Mb/s pricing. Kuwait now has published offers for 2 Mb/s circuits
- The cumulative effect of the reductions in some countries, and the removal of results for other countries, due to lack of published prices is an increase in the average cost for 64 Kb/s and 256 Kb/s circuits, and a corresponding decrease for 2 Mb/s, 34 Mb/s and 155 Mb/s circuits

		Arab average 2017 USD PPP	OECD average 2017 USD PPP	Arab average compared to OECD average
<b>Leased Lines</b>	64 Kb/s	607	N/A	
	256 kb/s	1322	N/A	
	2 Mb/s	2387	1753	● 36%
	34 Mb/s	21224	8435	● 152%
	155 Mb/s	39284	N/A	

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: FIXED BROADBAND (1)



- The Arab average residential cost is up to 5.5 times higher than the average OECD cost (similar to 2017). For business services, the average is up to 15.4 times higher (again, similar to 2017).
  - The residential figure continues to be skewed by particularly high costs in a number of countries, in particular, Qatar, Comoros, Mauritania, Sudan and, for high usage in particular, Yemen and Saudi Arabia. For business services, the Arab average is heavily skewed by a number of countries, including Comoros, Djibouti, Saudi Arabia, Algeria and Oman.
- Usage based charges are still prevalent, and appear in offers across 6 of the Arab countries, however, they have had limited impact on the basket results, and flat rate services have featured as the cheapest. In many OECD countries, usage-based charges often only apply for a very few ISPs.
- The availability of low speed services up to 2 Mb/s, continues to decline, with offers no longer available in Bahrain and Tunisia being removed for this speed range. Conversely, Kuwait has now been included in this lower speed range.
- The table below summarizes how the overall Arab average changed from 2017-2018. The picture is generally one of declining prices or relatively small increases.

Change in overall average 2017-2018	Residential			Business		
	Low	Medium	High	Low	Medium	High
0.25 - 2 Mb/s / 10 GB	↓	↓	↓	↑	↑	↑
2 - 10 Mb/s / 15 GB	↑	↑	↓	↑	↑	↓
10 - 30 Mb/s / 25 GB	↓	↓	↓	↓	↓	↓
30 - 100 Mb/s / 50 GB	↓	↓	↓	↓	↓	↓
100 - 1000 Mb/s / 100 GB	↑	↑	↑	↓	↓	↓

- While average speed continues to climb (up from 40 Mb/s in 2017 to 45 Mb/s in 2018), the climb hasn't been as dramatic as in previous years, and this update has seen few introductions of higher speed services. This is unsurprising, as already in a number of countries, advertised speeds are already quite high.
- There were much fewer price changes than in the previous update. Where changes were made, they were generally, due to general portfolio changes.
- The table on the next slide shows the cheapest and most expensive 3 countries for each basket, while the table on the second to next slide shows a comparison of the Arab averages for each basket, against the OECD averages

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: FIXED BROADBAND (2)



- There is a large variation in ranking according to the speed of service, for both residential services. The tables below shows the 3 cheapest and 3 most expensive countries for each of the 5 baskets considered for medium usage (low and high usage may differ, but typically don't)

Residential-medium usage	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd
0.25 - 2 Mb/s / 10 GB	Egypt	Syria	Yemen	Qatar	Mauritania	Lebanon
2 - 10 Mb/s / 15 GB	Syria	Egypt	Morocco	Comoros	Qatar	UAE
10 - 30 Mb/s / 25 GB	Egypt	Tunisia	Bahrain	Sudan	Mauritania	Algeria
30 - 100 Mb/s / 50 GB	Palestine	Jordan	Lebanon	UAE	Qatar	Oman
100 - 1000 Mb/s / 100 GB	Palestine	Jordan	Morocco	UAE	Oman	Bahrain

Business-medium usage	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd
0.25 - 2 Mb/s / 10 GB	Egypt	Sudan	Morocco	Saudi Arabia	Algeria	Comoros
2 - 10 Mb/s / 15 GB	Egypt	Morocco	Lebanon	Djibouti	Oman	Comoros
10 - 30 Mb/s / 25 GB	Egypt	Morocco	Jordan	Comoros	Algeria	Bahrain
30 - 100 Mb/s / 50 GB	Lebanon	Morocco	Jordan	Bahrain	Djibouti	Palestine
100 - 1000 Mb/s / 100 GB	Morocco	Jordan	Saudi Arabia	Oman	Qatar	UAE

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: FIXED BROADBAND (3)



Residential Fixed Broadband		Arab average 2018 USD PPP	OECD average 2018 USD PPP	Arab average compared to OECD average
Very low speed	L1: 0.25-2Mb/s, 5GB	56	35	● 59%
	M1: 0.25-2Mb/s, 10GB	57	35	● 61%
	H1: 0.25-2Mb/s, 20GB	61	35	● 73%
Low speed	L2: 2-10Mb/s, 5GB	72	33	● 120%
	M2: 2-10Mb/s, 15GB	73	33	● 123%
	H2: 2-10Mb/s, 50GB	238	33	● 611%
Medium speed	L3: 10-30Mb/s, 10GB	141	33	● 322%
	M3: 10-30Mb/s, 25GB	141	34	● 318%
	H3: 10-30Mb/s, 100GB	141	35	● 307%
High speed	L4: 30-100Mb/s, 15GB	144	36	● 299%
	M4: 30-100Mb/s, 50GB	144	36	● 299%
	H4: 30-100Mb/s, 200GB	147	37	● 294%
Very high speed	L5: 100-1000Mb/s, 25GB	239	43	● 455%
	M5: 100-1000Mb/s, 100GB	239	44	● 448%
	H5: 100-1000Mb/s, 400GB	239	44	● 448%

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: FIXED BROADBAND (4)



Business Fixed Broadband		Arab average 2017 USD PPP	OECD average 2017 USD PPP	Arab average compared to OECD average
Very low speed	L1: 0.25-2Mb/s, 5GB	107	76	● 41%
	M1: 0.25-2Mb/s, 10GB	107	76	● 41%
	H1: 0.25-2Mb/s, 20GB	107	76	● 42%
Low speed	L2: 2-10Mb/s, 5GB	128	58	● 121%
	M2: 2-10Mb/s, 15GB	133	58	● 128%
	H2: 2-10Mb/s, 50GB	137	58	● 134%
Medium speed	L3: 10-30Mb/s, 10GB	513	39	● 1230%
	M3: 10-30Mb/s, 25GB	513	39	● 1230%
	H3: 10-30Mb/s, 100GB	513	39	● 1230%
High speed	L4: 30-100Mb/s, 15GB	669	43	● 1443%
	M4: 30-100Mb/s, 50GB	669	44	● 1437%
	H4: 30-100Mb/s, 200GB	669	44	● 1430%
Very high speed	L5: 100-1000Mb/s, 25GB	797	62	● 1180%
	M5: 100-1000Mb/s, 100GB	797	62	● 1177%
	H5: 100-1000Mb/s, 400GB	797	62	● 1177%

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: MOBILE BROADBAND (1)



- Mobile broadband services are available across all the Arab countries.
  - The average advertised download speed is just over 89 Mb/s, up from 86 Mb/s in 2017
  - Higher speeds increasingly commonplace, with speeds in excess of 7.2 Mb/s available in 15 of the Arab countries , and accounting for 83% of offers.
  - Very low speeds of < 1Mb/s are only available in Djibouti and Palestine, while 1 Mb/s services are only available in Sudan.
- The table below shows the 3 cheapest and 3 most expensive countries for each basket, each speed category, for both residential and business services.

		Cheapest			Most expensive		
		1st	2nd	3rd	1st	2nd	3rd
Residential	2-8 Mb/s low usage	Sudan	Somalia	Tunisia	Iraq	Libya	Oman
	2-8 Mb/s high usage	Tunisia	Sudan	Somalia	Libya	Oman	Algeria
	> 8 Mb/s low usage	Egypt	Tunisia	Sudan	UAE	Kuwait	Iraq
	> 8 Mb/s high usage	Morocco	Egypt	Jordan	Algeria	Oman	Iraq
	All speed low usage	Egypt	Sudan	Somalia	UAE	Kuwait	Iraq
	All speed high usage	Sudan	Morocco	Egypt	Libya	Algeria	Yemen
Business	2-8 Mb/s low usage	Somalia	Algeria	Yemen	Libya	Oman	Iraq
	2-8 Mb/s high usage	Somalia	Syria	Yemen	Libya	Oman	Mauritania
	> 8 Mb/s low usage	Egypt	Morocco	Algeria	UAE	Iraq	Kuwait
	> 8 Mb/s high usage	Egypt	Morocco	Tunisia	UAE	Oman	Algeria
	All speed low usage	Egypt	Somalia	Morocco	UAE	Libya	Iraq
	All speed high usage	Egypt	Morocco	Tunisia	Libya	UAE	Oman

- The average varies according to which basket and speed is being considered, and whether the services are residential or business, but broadly, the residential Arab average is between 1.9 and 2.53 times more than the OECD average. For business services, the Arab/OECD ratio is similar - between 2.23 and 2.55 times. The cost of mobile broadband in the Arab countries, although still generally 2 to 2.5 times the cost of mobile broadband in the OECD (average) is much more in line than in previous years.
- There have been price and service changes from most of the Arab providers since 2016, with revisions of portfolios, increases in speed offerings, and increases in data allowances. The table below shows the overall shift in the Arab average for each basket and speed category, for both residential and business services

2017-2018	Residential	Business
2-8 Mb/s low usage	↓	↓
2-8 Mb/s high usage	↓	↓
> 8 Mb/s low usage	↑	↓
> 8 Mb/s high usage	↓	↓
All speed low usage	↓	↓
All speed high usage	↓	↓

# SUMMARY OF MAIN FINDINGS FROM THE BENCHMARKING STUDY: MOBILE BROADBAND (2)



Mobile Broadband for Laptops, Tablets & Modems, all speeds		Arab average 2018 USD PPP	OECD average 2018 USD PPP	Arab average compared to OECD average
Residential	1GB	23	12	● 93%
	6GB	47	22	● 110%
Business	1GB	32	12	● 155%
	6GB	57	26	● 122%



# APPENDIX



# EXCHANGE RATES AND VAT

Country	VAT	Exchange rate into €	Exchange rate into US\$	Exchange rate into BHD	National currency	PPP rate into US\$
Algeria	19.0%	0.00720	0.00863	0.00327	1	0.0331
Bahrain	0.0%	2.20507	2.64136	1.00000	1	5.4560
Comoros	10.0%	0.00203	0.00243	0.00092	1	0.0048
Djibouti	10.0%	0.00467	0.00559	0.00212	1	0.0101
Egypt	14.0%	0.04688	0.05615	0.02126	1	0.1800
Iraq	0.0%	0.83482	1.00000	0.37859	1	3.7710
Jordan	16.0%	1.17359	1.40580	0.53223	1	3.1175
Kuwait	0.0%	2.75895	3.30484	1.25119	1	8.9881
Lebanon	11.0%	0.00055	0.00066	0.00025	1	0.0011
Libya	0.0%	0.61039	0.73116	0.27681	1	1.7349
Mauritania	18.0%	0.00234	0.00280	0.00106	1	0.0098
Morocco	20.0%	0.08916	0.10680	0.04043	1	0.2907
Oman	0.0%	2.16545	2.59390	0.98203	1	6.6809
Palestine	16.0%	0.23583	0.28250	0.10695	1	0.6348
Qatar	0.0%	0.22895	0.27425	0.10383	1	0.5905
Saudi Arabia	5.0%	0.22246	0.26648	0.10089	1	0.7254
Somalia	10.0%	0.83482	1.00000	0.37859	1	3.3333
Sudan	35.0%	0.11858	0.14204	0.05378	1	0.2788
Syria	0.0%	0.00388	0.00465	0.00176	1	0.0076
Tunisia	18.0%	0.33955	0.40673	0.15399	1	1.2811
UAE	5.0%	0.22726	0.27223	0.10306	1	0.5249
Yemen	5.0%	0.00333	0.00399	0.00151	1	0.0101
USA	10.0%	0.83482	1.00000	0.37859	1	1.0000

VAT rate shown for Jordan is rate applied to businesses.

Rate for residential users is 8%

Exchange rates taken from the Oanda web service on the 1<sup>st</sup> January 2018

PPPs are based on World Bank CPL data in 2016 (latest available).



# PURCHASING POWER PARITIES (PPP)

- PPPs are used to incorporate not only the financial differences between exchange rates, but also the differences in the state of the economies as seen through the purchasing power of the citizens in each country.
  - PPPs are based on an assessment of the price levels for a corresponding basket of goods and services in each country. i.e. how much the same basket costs in different countries.
  - PPPs are normally stated based on the US\$ or some other reference currency, e.g. Euro. This study uses the US\$ PPPs calculated by the World Bank.
- In order to update these values the Comparative Price Level (CPL) is used. CPL is the relationship between the PPP and the reference market exchange rate at the time the PPP was calculated.
  - CPL is used together with updated, i.e. current, exchange rates to produce an “updated” PPP value.
  - $CPL = \text{Rate}_{\text{PPP}} / \text{Rate}_{\text{Reference}}$
  - $\text{PPP}_{\text{Current}} = \text{Rate}_{\text{Market}} * CPL$
- The advantage of using PPPs is that the results reflect the price differences as seen by the end users in each country based on their income and other costs.



# PPP BACKGROUND

- This benchmarking study relies on the PPP (Purchasing Power Parity) and CPL (Comparative Price Level) values produced by the OECD and the World Bank\*. PPPs are used in international studies to provide a more even comparison between countries, adjusting the exchange rates to the purchasing power of the consumer in each country. CPL is used to calculate PPP values from current market exchange rates, in order to obtain the most up to date combination of PPP and market exchange rates.
- PPPs are usually expressed in US\$, referring to the US market. PPPs are produced comparing the cost of a basket of goods and services across countries
  - The World Bank defines PPP as: " ... the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as a U.S. dollar would buy in the United States."
- The CPL is the ratio between PPP and Market Exchange Rate (XR) for a given country, as seen from a reference country (usually the USA).

$$\text{CPL} = \text{PPP}_{\text{US\$}} / \text{XR}_{\text{US\$}}$$

**CPL<1 means goods are more expensive, CPL>1 means goods are cheaper, referring to the USA.**

- The basket of goods and services is extensive, however, the PPP result will of course depend on the content of this basket. The OECD and the World Bank are working together to improve on the methodology to calculate the PPP.
- The World Bank implemented a new methodology for calculating the PPPs in 2011, improving the PPP results to show a more accurate ration between countries. The results of the implementation of this new methodology was seen in the previously published 2014
  - As the previous World Bank methodology was different to that used by the OECD, and the new World Bank methodology is now more aligned with the OECD methodology. The changes seen from the old to the new World Bank PPP values are smaller in OECD countries than in other countries of the world.

**\* The World Bank uses the term "Price Level Ratio" for the CPL.**

**Please note: Inverse values of PPP and CPL are also used, depending on application.**



# ACRONYMS USED IN THE CONTEXT OF THIS REPORT

- OECD: Organisation of Economic Co-operation and Development
- OECD countries: Australia, Austria, Belgium, Canada, Chile, Czech Rep., Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Rep., Slovenia, Spain, Sweden, Switzerland, Turkey, UK, USA
- AREGNET: Arab Regulators Network.
- AREGNET member countries: Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, UAE, Yemen
- VAT: Value Added Tax, a consumption tax system used in most European countries and some Arab countries.
- PPP: Purchasing Power Parity, exchange rates adjusted for the purchasing power of consumers in each country. Used in international comparisons to adjust for market differences.
- CPL: Comparative Price level. The relative factor between market exchange rates and PPP. Used to calculate the PPPs from current market exchange rates.
- Service: A telecommunications service
- Basket: A theoretical usage profile describing the usage volumes across different types of calls and/or different kinds of usage. The basket includes all important elements of the service, including fixed cost elements.
- Tariff: The description of all the end user prices related to a service
- Tariff element: The part of a tariff describing the price(s) for a single type of call or service component.
- Basket calculation: The process where the Basket is applied to the individual tariff in order to calculate the cost of the individual tariff elements and the overall cost.
- Basket result: The cost of using the service as described in the Basket.
- Re-balancing: The process through which the prices are changed so that individual Tariff elements will cover their own cost, and not subsidise other Tariff elements.