

Telecommunications Retail Price Benchmarking for Arab Countries 2021



Report from the AREGNET Price Benchmarking Study

August 2022

STRATEGYANALYTICS
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
• 2021 study overview	5
• Notes to the results	6
• Comparative Price Level (CPL) and Purchasing Power Parity (PPP)	7
• Price benchmarking with “Baskets”	8
• Results from the PSTN basket for 2021, time series and ranking	9
• Results from the mobile basket for 2021, time series and ranking	28
• Results from the fixed broadband basket for 2021, time series and ranking	55
• Results from the mobile broadband basket for 2021, time series and ranking	97
• Results from the leased line basket for 2021, time series and ranking	138
• Summary of main findings from the benchmarking study	154
• Appendix	
• Exchange rates and VAT	168
• PPP	169
• List of acronyms used	171



BACKGROUND TO THE STUDY AND BASKET CONTEXT

- The benchmarking study was originally initiated by TRA Bahrain in 2008 and has been updated on approximately an annual basis since then. This update for 2021 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 2017 to 2021.
- The benchmarking covers the following services:
 - Fixed voice (PSTN)
 - Mobile telephony
 - Fixed Broadband
 - Mobile broadband
 - Leased Lines
- The basket methodologies used are identical to the OECD Price Benchmarking baskets from 2017, with minor changes. A separate document detailing the methodology used in this study is available.
- The data was collected in Q4 2021 by Teligen from public sources on the Internet and was subsequently passed to national regulators for comments and checking.



2021 STUDY OVERVIEW

- The 2021 AREGNET study results are presented in this report. As in previous years, the study benchmarks fixed and mobile voice and data services across the 22 AREGNET countries
- In terms of data collection and verification:
 - Data was collected directly from operator websites over the period Q4 2021
 - Country data files and draft results in local currencies were prepared and distributed to AREGNET members for review
 - Following receipt of comments, system files were finalised and reports prepared
- The methodology used is based on the 2017 OECD basket revisions, which also featured in the 2020 update to this study. Full details of the OECD 2017 methodology are available, but key changes over the OECD 2010 methodology include:
 - Removal of international calls from fixed voice baskets
 - Revision of mobile baskets, with sets of baskets focusing on low and high data usage separately, with increased data usage in the high data usage category
 - Revision of speed categories for fixed broadband services, including removal of upper speed limit within individual baskets
 - Revision of data usage within mobile broadband services.



NOTES TO THE RESULTS

- Due to the change in baskets, results in this update are not necessarily comparable to previous reports
- For time series comparison, however, the new baskets have been applied retrospectively, to produce historic results based on the current (new) baskets.
- As with previous updates, exchange rate and CPL (comparative price level) current data is applied retrospectively to historic data, so that changes to time series reflect changes to tariffs only and are not impacted by changes in either exchange rates or CPLs.
- For this report, both OECD country results and AREGNET country results have been adjusted using World Bank CPLs. This is different to previous reports, where OECD results have used OECD CPLs and AREGNET country results have been adjusted using World Bank CPLs
 - This means that both sets of data – OECD and AREGNET – are based on conversions from the same source
 - Note however, OECD results converted using World Bank CPLs will not be directly comparable to official OECD results.
- Feedback, where received, has been considered in the production of these results

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 169 to 170, in the appendix of this report.
- The CPL data used for this study has been obtained from the World Bank and is based on 2020 data, unless otherwise stated.
- For this report, both OECD country results and AREGNET country results have been adjusted using World Bank CPLs. This is different to previous reports, where OECD results have used OECD CPLs and AREGNET country results have been adjusted using World Bank CPLs
 - This means that both sets of data – OECD and AREGNET – are based on conversions from the same source
 - Note however, OECD results converted using World Bank CPLs will not be directly comparable to official OECD results.
- The World Bank CPL data also contained some gaps i.e., data for Palestine and Somalia 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.

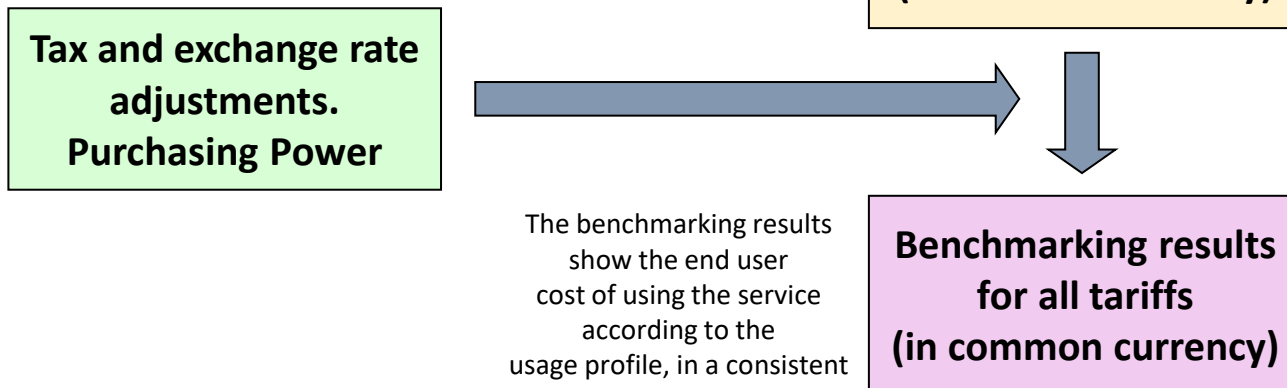


PRICE BENCHMARKING WITH TELECOMS BASKETS

Combine tariff information with a usage profile in a “basket calculation engine” to calculate cost of individual calls and tariff elements.



Adjust costs for tax, currency and purchasing power to create comparable results.



The benchmarking results show the end user cost of using the service according to the usage profile, in a consistent format.



PSTN BASKET RESULTS 2021



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:
 - Iraq
 - Libya
 - Somalia
 - Sudan
 - Syria
 - Yemen
- Business tariffs are not published (and no business results are included) for:
 - Algeria
 - Djibouti
 - Egypt
 - Iraq
 - Somalia
 - Sudan
 - Syria
 - Yemen
- The analysis covers up to 86 tariffs from the incumbent operators in 20 countries





FIXED VOICE (PSTN) BASKETS, OECD 2017 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	Call distribution			
	Total	Fixed to fixed	Fixed to fixed	Fixed to mobile
	calls	Local	National	
20 calls basket	20	61%	20%	19%
60 calls basket	60	60%	15%	25%
140 calls basket	140	58%	15%	27%
420 calls basket	420	73%	17%	10%
100 calls business basket	100	48%	19%	33%
260 calls business basket	260	43%	23%	34%

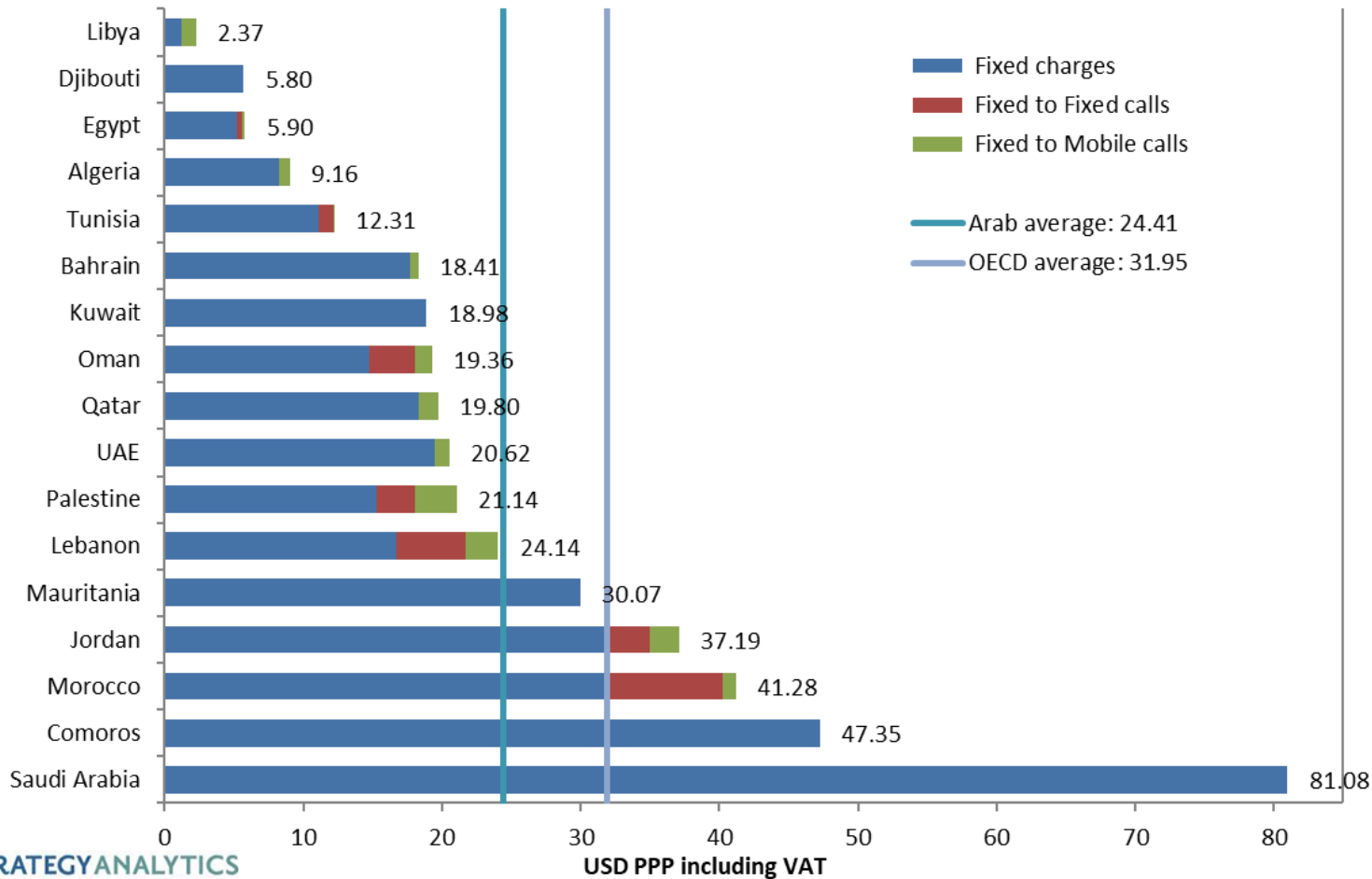
- Tariffs from the incumbent operator in each country
 - Several tariff packages can be covered for each operator
 - The results show the lowest cost option for each operator
- Tariff information included in basket calculation:
 - Fixed charges for installation (depreciated over the service life) and monthly rental. These are shown on the following charts as **Fixed charges**
 - Usage charges covering local through to national calls and calls to mobiles. These are shown on the following charts as **Fixed to Fixed calls** and **Fixed to Mobile calls**.
 - International calls are now **no longer** part of the OECD methodology and have been excluded from the baskets



20 CALLS/MONTH, RESIDENTIAL BASED ON 2017 OECD FIXED VOICE BASKET



AREGNET Fixed Voice Price Benchmarking 2021
OECD 2017: 20 calls Residential



No data for:

- Iraq
- Somalia
- Sudan
- Syria
- Yemen

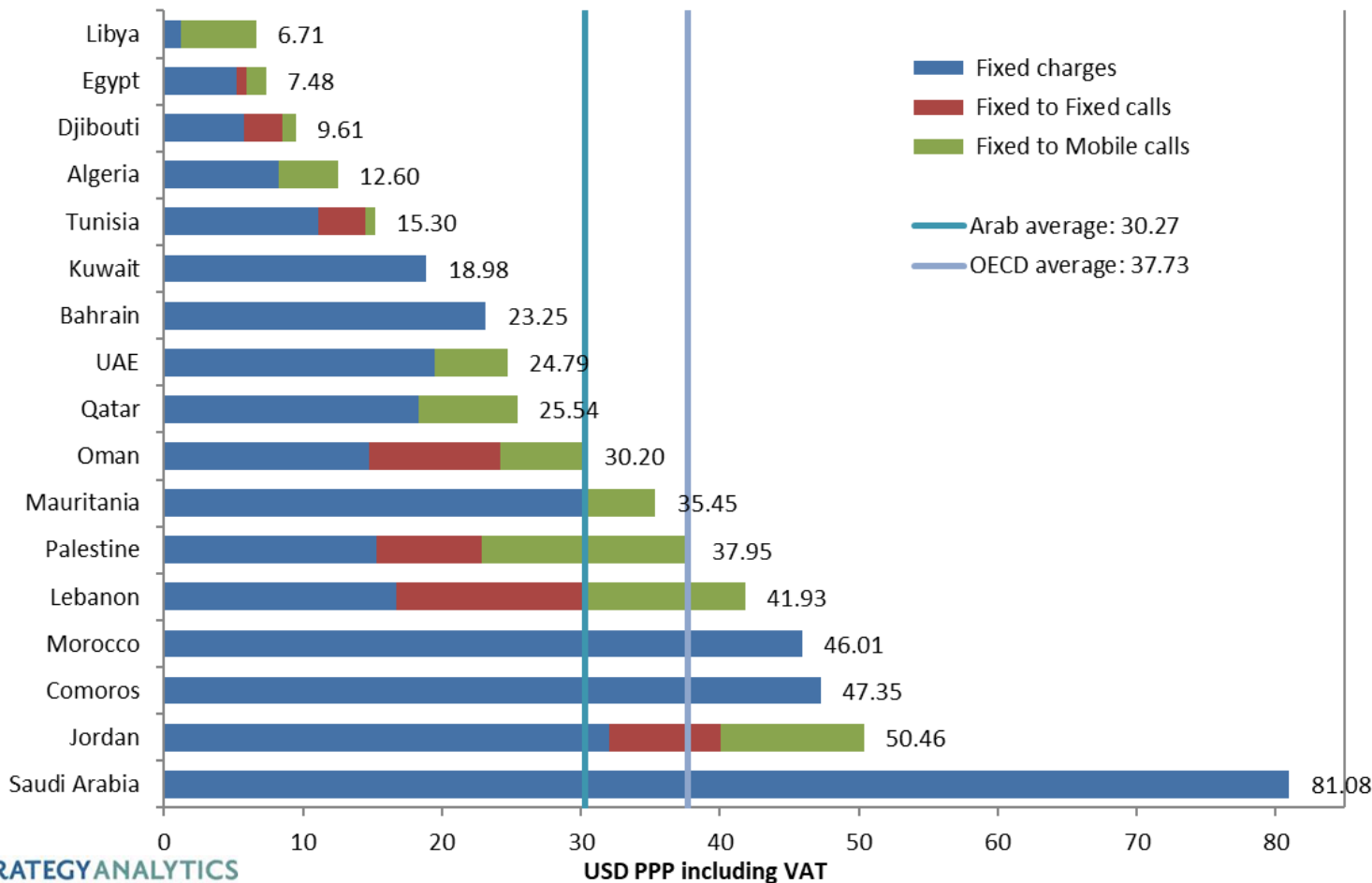
For information on what is included in Fixed charges, Fixed to Fixed calls and Fixed to Mobile calls, please see page 11



60 CALLS/MONTH, RESIDENTIAL BASED ON 2017 OECD FIXED VOICE BASKET



AREGNET Fixed Voice Price Benchmarking 2021
OECD 2017: 60 calls Residential



No data for:

- Iraq
- Somalia
- Sudan
- Syria
- Yemen

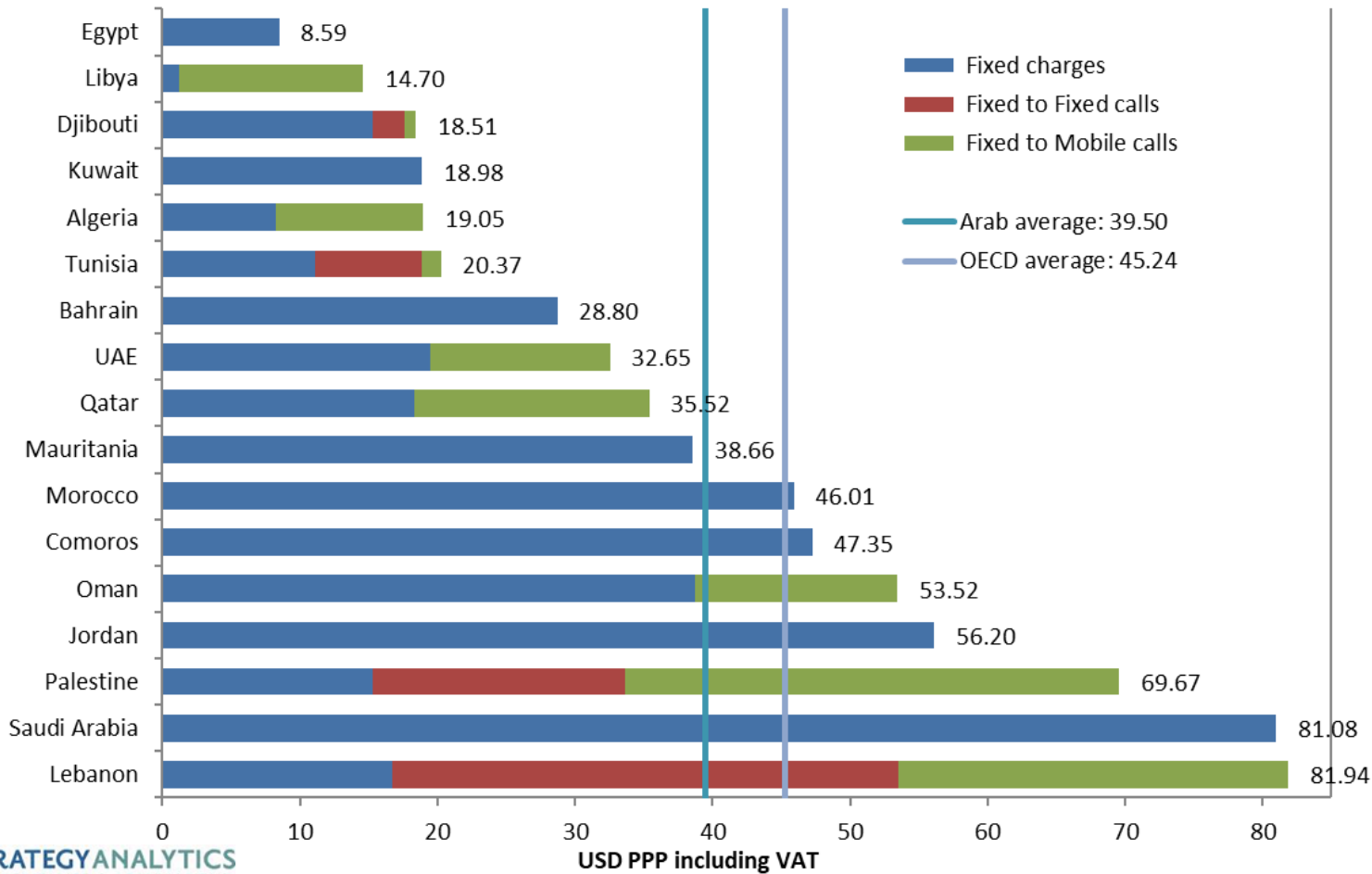
For information on what is included in Fixed charges, Fixed to Fixed calls and Fixed to Mobile calls, please see page 11



140 CALLS/MONTH, RESIDENTIAL BASED ON 2017 OECD FIXED VOICE BASKET



AREGNET Fixed Voice Price Benchmarking 2021
OECD 2017: 140 calls Residential



No data for:

- Iraq
- Somalia
- Sudan
- Syria
- Yemen

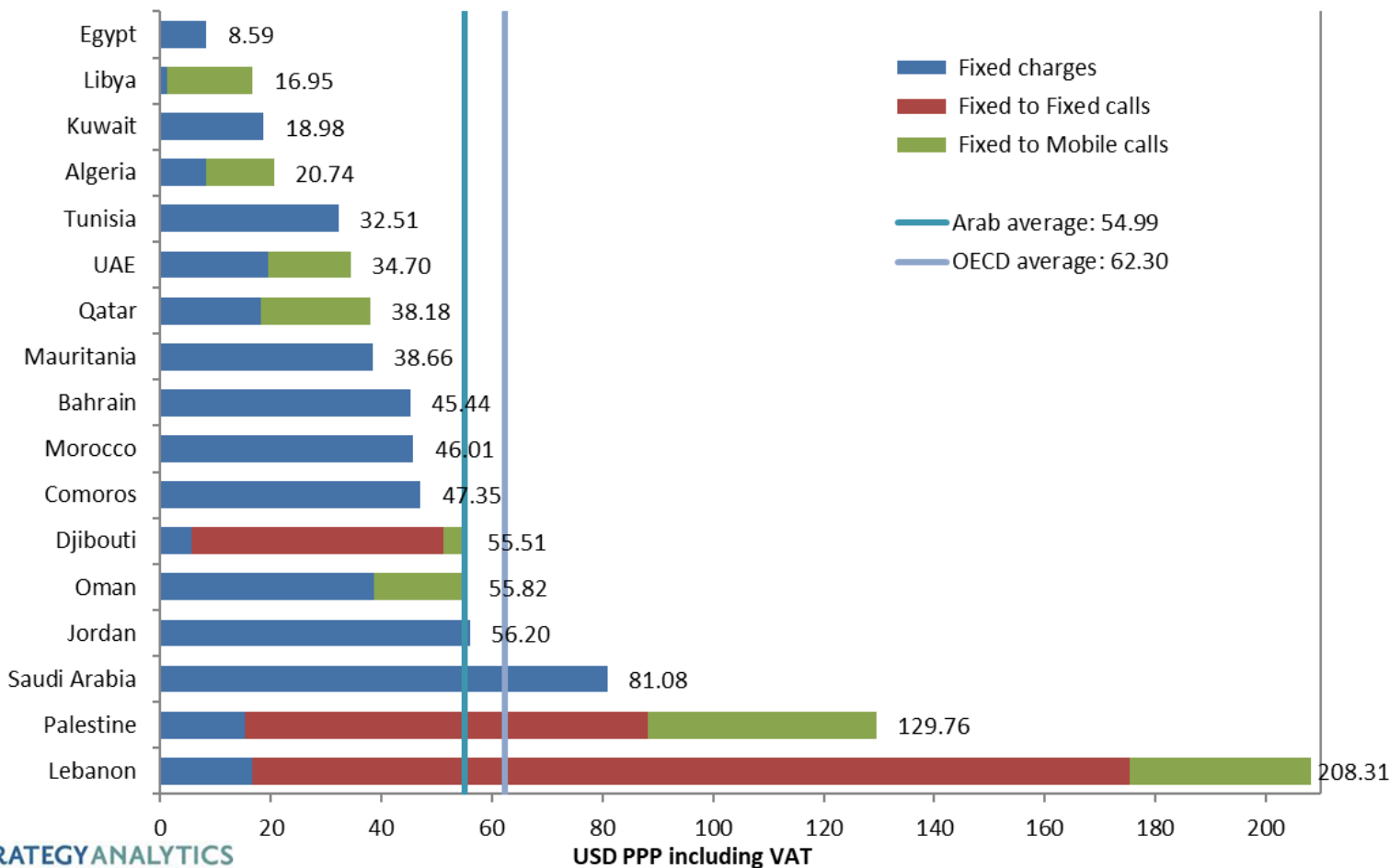
For information on what is included in Fixed charges, Fixed to Fixed calls and Fixed to Mobile calls, please see page 11



420 CALLS/MONTH, RESIDENTIAL BASED ON 2017 OECD FIXED VOICE BASKET



AREGNET Fixed Voice Price Benchmarking 2021
OECD 2017: 420 calls Residential



No data for:

- Iraq
- Somalia
- Sudan
- Syria
- Yemen

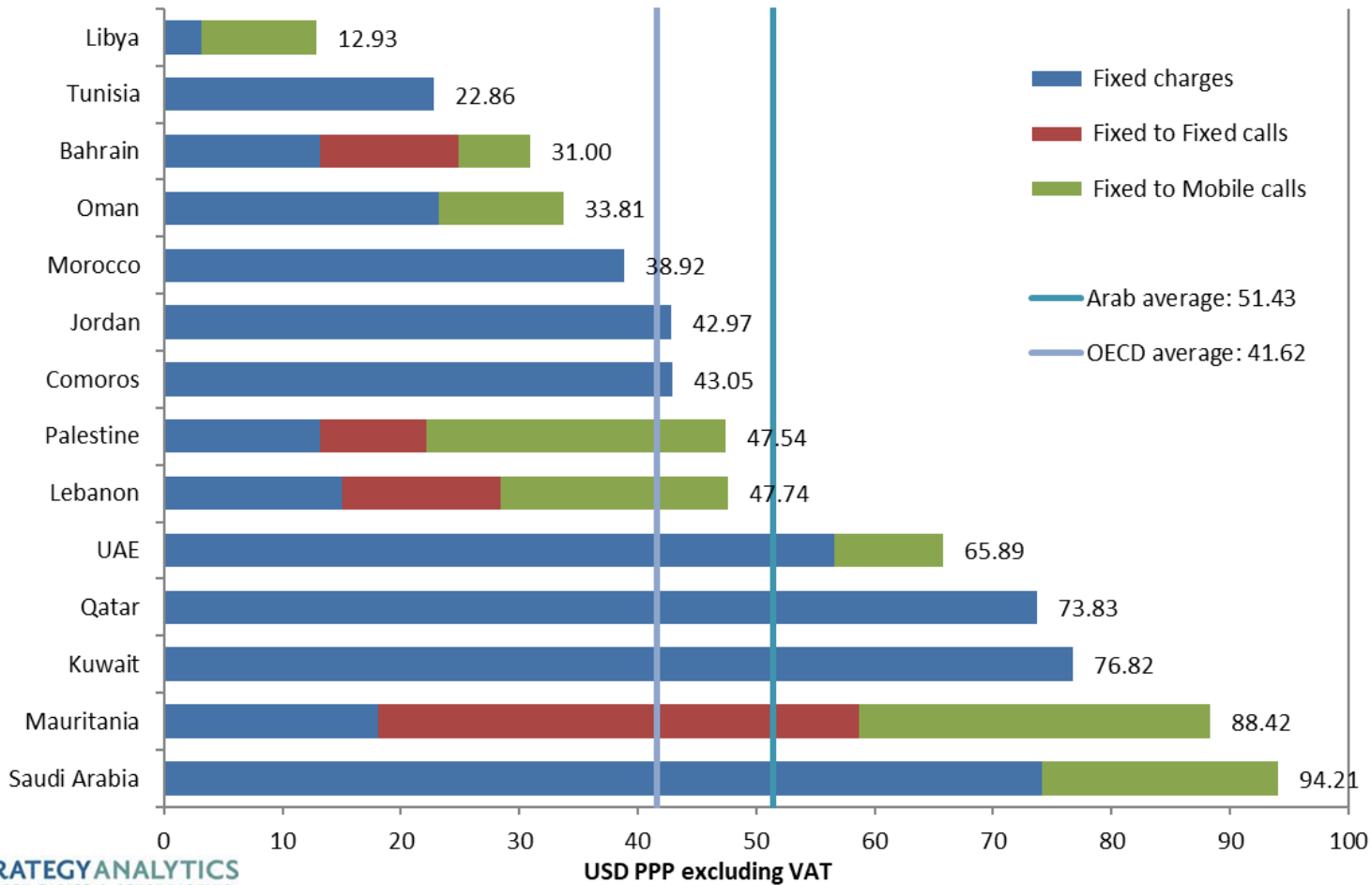
For information on what is included in Fixed charges, Fixed to Fixed calls and Fixed to Mobile calls, please see page 11



100 CALLS/MONTH, BUSINESS BASED ON 2017 OECD FIXED VOICE BASKET



AREGNET Fixed Voice Price Benchmarking 2021
OECD 2017: 100 calls Business



No data for:

- Algeria
- Djibouti
- Egypt
- Iraq
- Somalia
- Sudan
- Syria
- Yemen

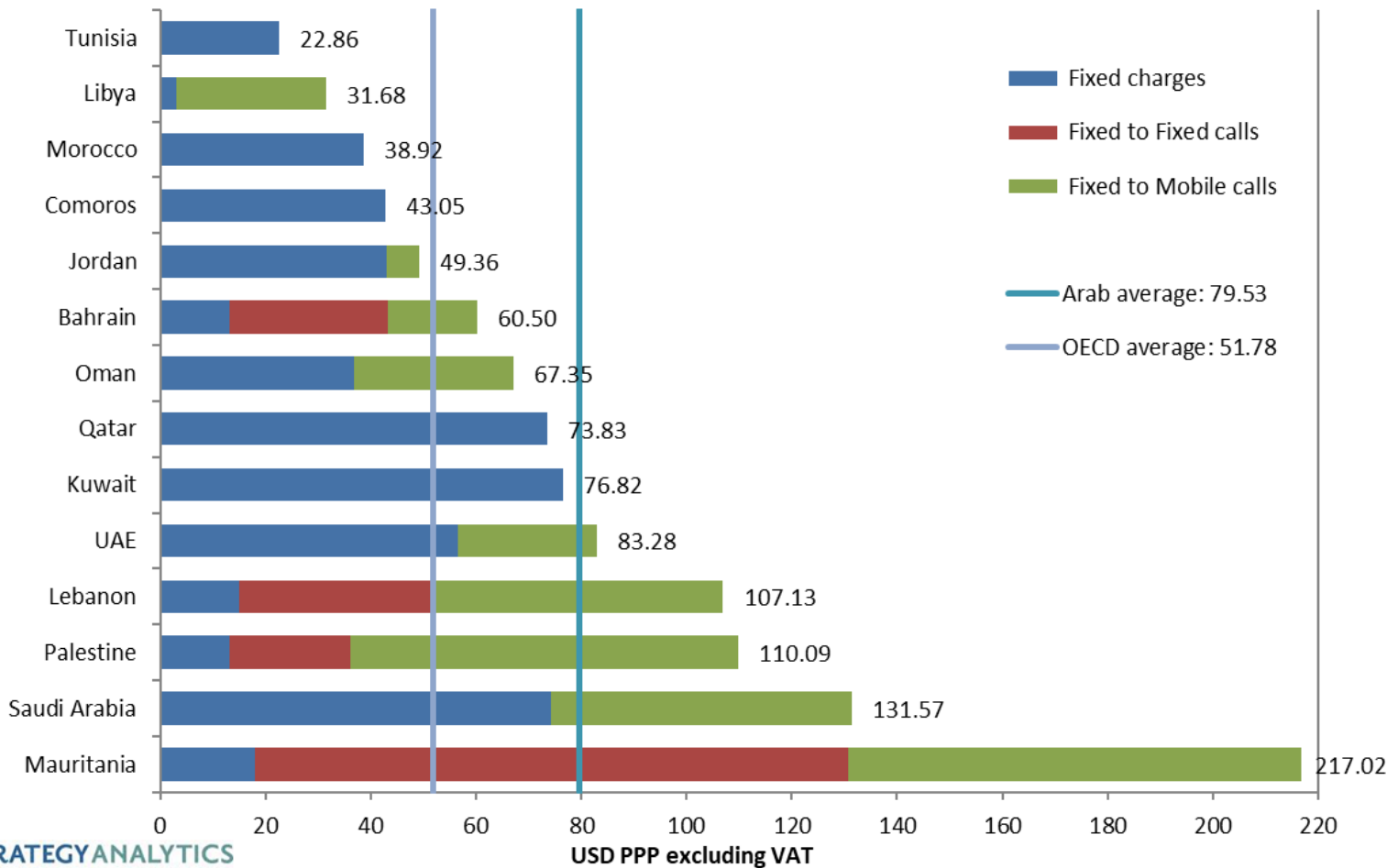
For information on what is included in Fixed charges, Fixed to Fixed calls and Fixed to Mobile calls, please see page 11



260 CALLS/MONTH, BUSINESS BASED ON 2017 OECD FIXED VOICE BASKET



AREGNET Fixed Voice Price Benchmarking 2021
OECD 2017: 260 calls Business



No data for:

- Algeria
- Djibouti
- Egypt
- Iraq
- Somalia
- Sudan
- Syria
- Yemen

For information on what is included in Fixed charges, Fixed to Fixed calls and Fixed to Mobile calls, please see page 11





OBSERVATIONS FROM FIXED VOICE BASKET RESULTS

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

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

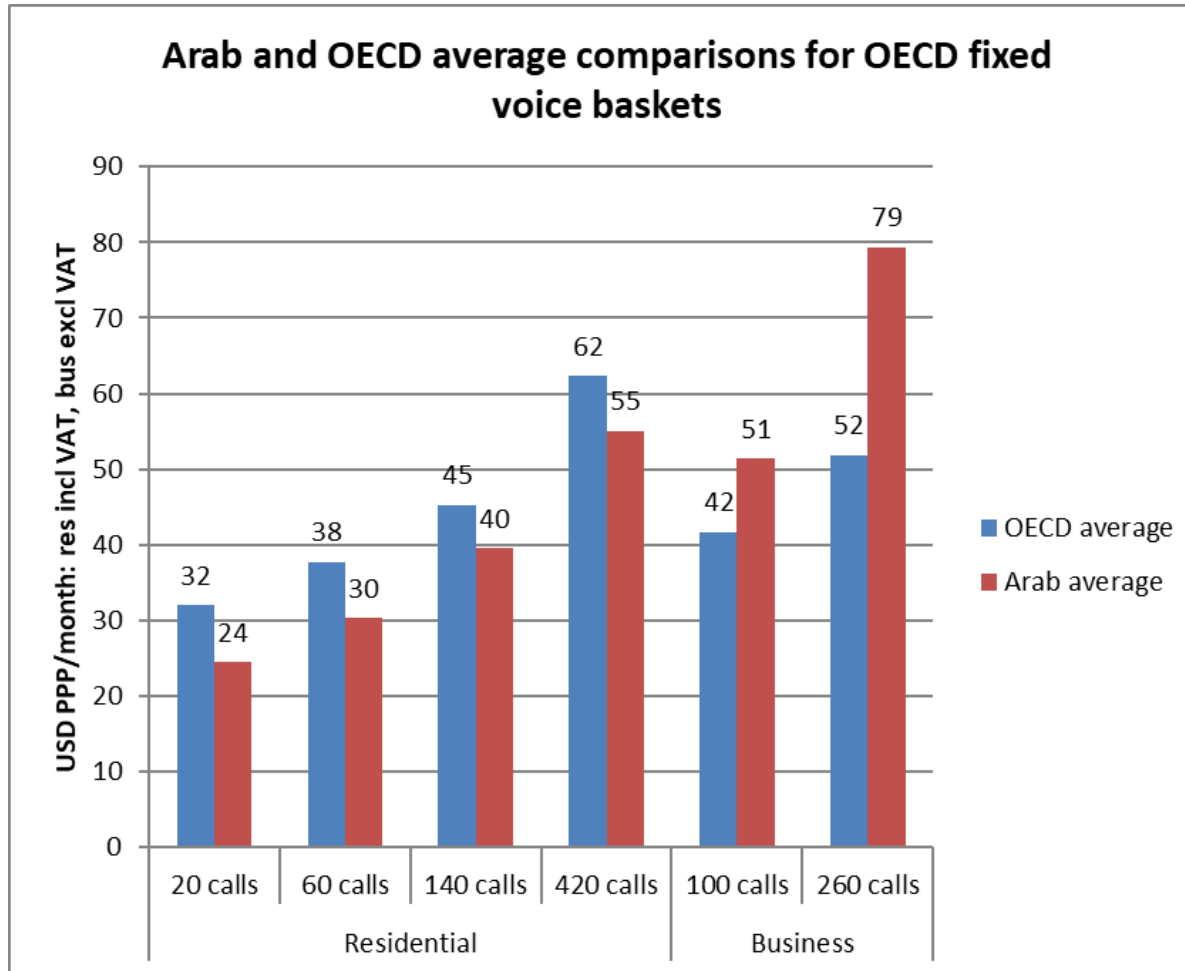
- Comparison between OECD and Arab averages are shown on the following slide, however, the following can be observed:
 - The trend from previous updates continues for residential services. A large proportion of countries are either below the OECD average, or are on par with it, and the Arab average is consistently below that of the OECD average. Consequently, at this level of usage, the Arab average is below that of the OECD, between 12-24% cheaper.
 - For business services, The position is reversed, with a large proportion of countries above the OECD average, and the Arab average is consistently higher than that of the OECD, 23% for the 100 calls basket and 53% for the 260 calls basket..
- As in previous years, a number of the Arab countries in North Africa are cheaper than those in the Middle East, although as usage increases, operators in the Middle East become comparatively more competitive.
- Djibouti, Egypt and Libya and feature consistently among the cheapest for the residential baskets, while Libya and Tunisia feature regularly for the business baskets. In terms of the most expensive, Comoros, Lebanon and Saudi Arabia feature frequently for residential baskets, while Mauritania and Saudi Arabia are among the most expensive countries for the business baskets.
- 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.

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





COMPARISON OF OECD AND ARAB AVERAGES



- For residential baskets, the Arab average is consistently lower than 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 24% more, and higher usage businesses paying around 54% more.





FIXED VOICE TIME SERIES ANALYSIS AND RANKING TABLES 2017-2021

2017 OECD FIXED VOICE BASKETS RANKING, 20 CALLS/MONTH, RESIDENTIAL



Results for Fixed Voice: OECD 2017: 20 calls Residential basket, 2017-2021
Results in USD PPP including VAT

	2017	2018	2019	2020	2021
Algeria	8.22	8.36	8.36	11.04	9.16
Bahrain	11.65	11.65	12.23	18.41	18.41
Comoros	47.35	47.35	47.35	47.35	47.35
Djibouti	14.14	14.14	14.14	14.14	5.80
Egypt	4.33	4.33	5.88	5.72	5.90
Jordan	28.81	28.81	32.76	32.76	37.19
Kuwait		18.98	16.33	16.33	18.98
Lebanon	23.92	24.14	24.14	24.14	24.14
Libya					2.37
Mauritania	29.90	24.20	30.07	30.07	30.07
Morocco	40.41	40.41	41.28	41.28	41.28
Oman	19.36	19.36	19.36	19.36	19.36
Palestine	18.88	18.88	18.44	21.14	21.14
Qatar	19.09	19.09	19.09	19.09	19.80
Saudi Arabia	32.17	33.78	33.78	37.00	81.08
Somalia					
Sudan					
Syria					
Tunisia	10.94	10.94	12.45	12.45	12.31
UAE	19.62	20.60	20.62	20.62	20.62
Yemen					

Arab average	20.70	20.44	22.27	23.18	24.41
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	2	2	2	2	4
Bahrain	4	4	3	6	6
Comoros	15	16	16	16	16
Djibouti	5	5	5	4	2
Egypt	1	1	1	1	3
Jordan	11	13	13	13	14
Kuwait	-	7	6	5	7
Lebanon	10	11	11	11	12
Libya	-	-	-	-	1
Mauritania	12	12	12	12	13
Morocco	14	15	15	15	15
Oman	8	9	9	8	8
Palestine	6	6	7	10	11
Qatar	7	8	8	7	9
Saudi Arabia	13	14	14	14	17
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	3	3	4	3	5
UAE	9	10	10	9	10
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive





2017 OECD FIXED VOICE BASKETS RANKING, 60 CALLS/MONTH, RESIDENTIAL



Results for Fixed Voice: OECD 2017: 60 calls Residential basket, 2017-2021
Results in USD PPP including VAT



	2017	2018	2019	2020	2021
Algeria	20.93	21.28	21.28	16.92	12.60
Bahrain	13.17	13.17	13.83	23.25	23.25
Comoros	47.35	47.35	47.35	47.35	47.35
Djibouti	21.00	21.00	21.00	21.00	9.61
Egypt	6.62	6.62	7.46	7.10	7.48
Jordan	42.08	42.08	46.03	46.03	50.46
Kuwait		18.98	16.33	16.33	18.98
Lebanon	41.55	41.93	41.93	41.93	41.93
Libya					6.71
Mauritania	36.13	36.13	35.45	35.45	35.45
Morocco	45.15	45.15	46.01	46.01	46.01
Oman	30.20	30.20	30.20	30.20	30.20
Palestine	35.00	35.00	34.56	37.95	37.95
Qatar	25.08	25.08	25.08	25.08	25.54
Saudi Arabia	43.22	45.38	45.38	49.70	81.08
Somalia					
Sudan					
Syria					
Tunisia	14.90	14.90	15.77	15.77	15.30
UAE	23.53	24.71	24.78	24.79	24.79
Yemen					

Arab average	28.29	27.98	29.53	30.30	30.27
--------------	-------	-------	-------	-------	-------

 Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	4	6	6	4	4
Bahrain	2	2	2	6	7
Comoros	15	16	16	15	15
Djibouti	5	5	5	5	3
Egypt	1	1	1	1	2
Jordan	12	13	15	14	16
Kuwait	-	4	4	3	6
Lebanon	11	12	12	12	13
Libya	-	-	-	-	1
Mauritania	10	11	11	10	11
Morocco	14	14	14	13	14
Oman	8	9	9	9	10
Palestine	9	10	10	11	12
Qatar	7	8	8	8	9
Saudi Arabia	13	15	13	16	17
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	3	3	3	2	5
UAE	6	7	7	7	8
Yemen	-	-	-	-	-

 Least expensive
 Most expensive



2017 OECD FIXED VOICE BASKETS RANKING, 140 CALLS/MONTH, RESIDENTIAL



Results for Fixed Voice: OECD 2017: 140 calls Residential basket, 2017-2021
Results in USD PPP including VAT

	2017	2018	2019	2020	2021
Algeria	41.02	37.13	37.13	23.61	19.05
Bahrain	18.46	18.46	19.38	28.80	28.80
Comoros	47.35	47.35	47.35	47.35	47.35
Djibouti	36.39	36.39	36.39	36.39	18.51
Egypt	10.69	10.69	12.37	12.39	8.59
Jordan	44.50	44.50	48.45	48.45	56.20
Kuwait		18.98	16.33	16.33	18.98
Lebanon	81.20	81.94	81.94	81.94	81.94
Libya					14.70
Mauritania	49.83	49.83	38.66	38.66	38.66
Morocco	45.15	45.15	46.01	46.01	46.01
Oman	53.52	53.52	53.52	53.52	53.52
Palestine	67.46	67.46	67.02	69.67	69.67
Qatar	35.74	35.74	35.74	35.74	35.52
Saudi Arabia	67.94	71.33	71.33	70.51	81.08
Somalia					
Sudan					
Syria					
Tunisia	19.74	19.74	21.41	21.41	20.37
UAE	30.90	32.44	32.61	32.65	32.65
Yemen					

Arab average	41.54	40.31	41.60	41.46	39.50
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	7	8	8	4	5
Bahrain	2	2	3	5	7
Comoros	10	11	11	11	12
Djibouti	6	7	7	8	3
Egypt	1	1	1	1	1
Jordan	8	9	12	12	14
Kuwait	-	3	2	2	4
Lebanon	15	16	16	16	17
Libya	-	-	-	-	2
Mauritania	11	12	9	9	10
Morocco	9	10	10	10	11
Oman	12	13	13	13	13
Palestine	13	14	14	14	15
Qatar	5	6	6	7	9
Saudi Arabi	14	15	15	15	16
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	3	4	4	3	6
UAE	4	5	5	6	8
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED VOICE BASKETS RANKING, 420 CALLS/MONTH, RESIDENTIAL



Results for Fixed Voice: OECD 2017: 420 calls Residential basket, 2017-2021
Results in USD PPP including VAT

	2017	2018	2019	2020	2021
Algeria	76.36	40.51	40.51	24.88	20.74
Bahrain	34.31	34.31	36.02	45.44	45.44
Comoros	47.35	47.35	47.35	47.35	47.35
Djibouti	94.51	94.51	94.51	94.51	55.51
Egypt	16.31	16.31	12.92	12.94	8.59
Jordan	44.50	44.50	48.45	48.45	56.20
Kuwait		18.98	16.33	16.33	18.98
Lebanon	206.43	208.31	208.31	208.31	208.31
Libya					16.95
Mauritania	49.83	49.83	38.66	38.66	38.66
Morocco	45.15	45.15	46.01	46.01	46.01
Oman	55.82	55.82	55.82	55.82	55.82
Palestine	129.12	129.12	128.68	129.76	129.76
Qatar	38.52	38.52	38.52	38.52	38.18
Saudi Arabia	81.30	85.37	85.37	70.51	81.08
Somalia					
Sudan					
Syria					
Tunisia	32.51	32.51	32.51	32.51	32.51
UAE	32.82	34.46	34.66	34.70	34.70
Yemen					

Arab average	62.61	58.38	60.29	59.04	54.99
--------------	-------	-------	-------	-------	-------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	11	7	8	3	4
Bahrain	4	4	5	8	9
Comoros	8	10	10	10	11
Djibouti	13	14	14	14	12
Egypt	1	1	1	1	1
Jordan	6	8	11	11	14
Kuwait	-	2	2	2	3
Lebanon	15	16	16	16	17
Libya	-	-	-	-	2
Mauritania	9	11	7	7	8
Morocco	7	9	9	9	10
Oman	10	12	12	12	13
Palestine	14	15	15	15	16
Qatar	5	6	6	6	7
Saudi Arabia	12	13	13	13	15
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	2	3	3	4	5
UAE	3	5	4	5	6
Yemen	-	-	-	-	-

Least expensive
 Most expensive



2017 OECD FIXED VOICE BASKETS RANKING, 100 CALLS/MONTH, BUSINESS



RANKING TABLES

Results for Fixed Voice: OECD 2017: 100 calls Businesss basket, 2017-2021

Results in USD PPP excluding VAT

	2017	2018	2019	2020	2021
Algeria	26.77				
Bahrain	30.19	30.19	30.19	30.19	30.19
Comoros	43.05	43.05	43.05	43.05	43.05
Djibouti	22.41	22.41	22.41	22.41	
Egypt					
Jordan	44.26	45.24	42.97	42.97	42.97
Kuwait			64.02	64.02	76.82
Lebanon	47.75	47.74	47.74	47.74	47.74
Libya					12.93
Mauritania	88.42	88.42	88.42	88.42	88.42
Morocco	38.92	38.92	38.92	38.92	38.92
Oman	35.51	35.51	35.51	35.51	33.81
Palestine	43.92	43.92	43.55	47.54	47.54
Qatar	112.53	112.53	73.83	73.83	73.83
Saudi Arabia	54.44	54.44	54.44	54.44	94.21
Somalia					
Sudan					
Syria					
Tunisia	18.47	18.47	13.93	22.86	22.86
UAE	65.89	52.64	52.76	52.76	65.89
Yemen					

Arab average	45.70	46.17	46.55	47.47	51.37
--------------	-------	-------	-------	-------	-------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2016-2021

	2017	2018	2019	2020	2021
Algeria	3	-	-	-	-
Bahrain	4	3	3	3	3
Comoros	7	6	7	7	7
Djibouti	2	2	2	1	-
Egypt	-	-	-	-	-
Jordan	9	8	6	6	6
Kuwait	-	-	12	12	12
Lebanon	10	9	9	9	9
Libya	-	-	-	-	1
Mauritania	13	12	14	14	13
Morocco	6	5	5	5	5
Oman	5	4	4	4	4
Palestine	8	7	8	8	8
Qatar	14	13	13	13	11
Saudi Arabi	11	11	11	11	14
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	1	1	1	2	2
UAE	12	10	10	10	10
Yemen	-	-	-	-	-

Least expensive
 Most expensive



2017 OECD FIXED VOICE BASKETS RANKING, 260 CALLS/MONTH, BUSINESS



RANKING TABLES

Results for Fixed Voice: OECD 2017: 260 calls Business basket, 2017-2021
Results in USD PPP excluding VAT

	2017	2018	2019	2020	2021
Algeria	52.40				
Bahrain	58.35	58.35	58.35	58.35	58.35
Comoros	43.05	43.05	43.05	43.05	43.05
Djibouti	45.06	45.06	45.06	45.06	
Egypt					
Jordan	57.88	58.87	56.60	49.36	49.36
Kuwait			64.02	64.02	76.82
Lebanon	107.14	107.13	107.13	107.13	107.13
Libya					31.68
Mauritania	217.02	217.02	217.02	217.02	217.02
Morocco	38.92	38.92	38.92	38.92	38.92
Oman	70.72	70.72	70.72	70.72	67.35
Palestine	108.86	108.86	108.48	110.09	110.09
Qatar	140.19	140.19	73.83	73.83	73.83
Saudi Arabia	98.03	98.03	98.03	98.03	131.57
Somalia					
Sudan					
Syria					
Tunisia	18.47	18.47	13.93	22.86	22.86
UAE	83.28	70.02	70.38	70.38	83.28
Yemen					

Arab average	78.07	79.03	76.11	76.34	79.38
--------------	-------	-------	-------	-------	-------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2016-2021

	2017	2018	2019	2020	2021
Algeria	5	-	-	-	-
Bahrain	7	5	6	6	6
Comoros	3	3	3	3	4
Djibouti	4	4	4	4	-
Egypt	-	-	-	-	-
Jordan	6	6	5	5	5
Kuwait	-	-	7	7	9
Lebanon	11	10	12	12	11
Libya	-	-	-	-	2
Mauritania	14	13	14	14	14
Morocco	2	2	2	2	3
Oman	8	8	9	9	7
Palestine	12	11	13	13	12
Qatar	13	12	10	10	8
Saudi Arabia	10	9	11	11	13
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	1	1	1	1	1
UAE	9	7	8	8	10
Yemen	-	-	-	-	-

Least expensive
 Most expensive





OBSERVATIONS FROM FIXED VOICE TIME SERIES RESULTS

- There have been some changes to fixed voice from the 2020 update, most of which were small but some of which had a more significant impact.
- The most notable price changes 2020-2021:
 - Algeria Telecom made some changes to call charges for its Idoom Fixed 500 service, and replaced the Idoom 1000 plan with the Idoom Fixed 750 plan.
 - Djibouti Telecom added new fixed voice plans
 - Egypt Telecom made changes to included minutes and call charges
 - Orange Jordan made changes to residential plan monthly fees
 - MOC, Kuwait made changes to connection charges
 - VAT is now payable on communications services in Oman, at 5%
 - Saudi Arabia made changes to monthly fees for both residential and business services. Charges for Hatif plans are no longer published.
 - Tunisie Telecom made changes to residential call charges
 - Etisalat UAE made changes to business landline pricing.
- Average costs across almost all residential and business baskets have changed from the previous year, as shown below. The very low usage residential basket cost increased over the past year, however as usage increases, the average cost decreases. For business services, average costs are higher than last year, although the change in average cost declines as usage increase, similar to the residential baskets.

Change in overall average

2020-2021

20 calls residential	↑	5%
60 calls residential	↓	0%
140 calls residential	↓	-5%
420 calls residential	↓	-7%
100 calls business	↑	8%
260 calls business	↑	4%

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



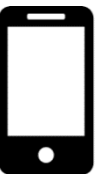


MOBILE BASKET RESULTS 2021



MOBILE TARIFF DATA ISSUES

- Tariff restrictions:
 - Only pre-paid for Comoros
 - One operator only for Comoros
- Otherwise two operators are covered for each country where data is available
- A total of 1116 tariff packages covered for 40 operators in 22 countries
- Results are presented for residential prepaid and postpaid offerings, in line with OECD methodology and in line with previous AREGNET studies
- The high data allowances in some of the OECD baskets for 2017 may result in very high costs for high data baskets in those countries where tariffs are not optimised for high levels of data use.





MOBILE VOICE AND DATA BASKETS, 2017 DEFINITIONS

- There are 12 baskets OECD baskets for mobile voice/mobile voice and data:
 - 2 baskets with no data
 - 5 baskets with lower data use
 - 5 baskets with higher data use
- Included in the OECD 2017 definitions are two unlimited voice baskets. Results for these have not been included due to the small number of providers that have unlimited offers.
- The 2017 baskets are shown in the table below.

Basket	Voice calls	SMS	Data (GB)
30 calls, no data	30	10	0
100 calls, no data	100	20	0
30 calls, 0.1 GB	30	20	0.1
100 calls, 0.5 GB	100	40	0.5
300 calls, 1 GB	300	80	1
900 calls, 2 GB	900	160	2
Unlimited voice, 5 GB	Unlimited	Unlimited	5
30 calls, 0.5 GB	30	10	0.5
100 calls, 2 GB	100	20	2
300 calls, 5 GB	300	40	5
900 calls, 10 GB	900	80	10
Unlimited voice, 20 GB	Unlimited	Unlimited	20

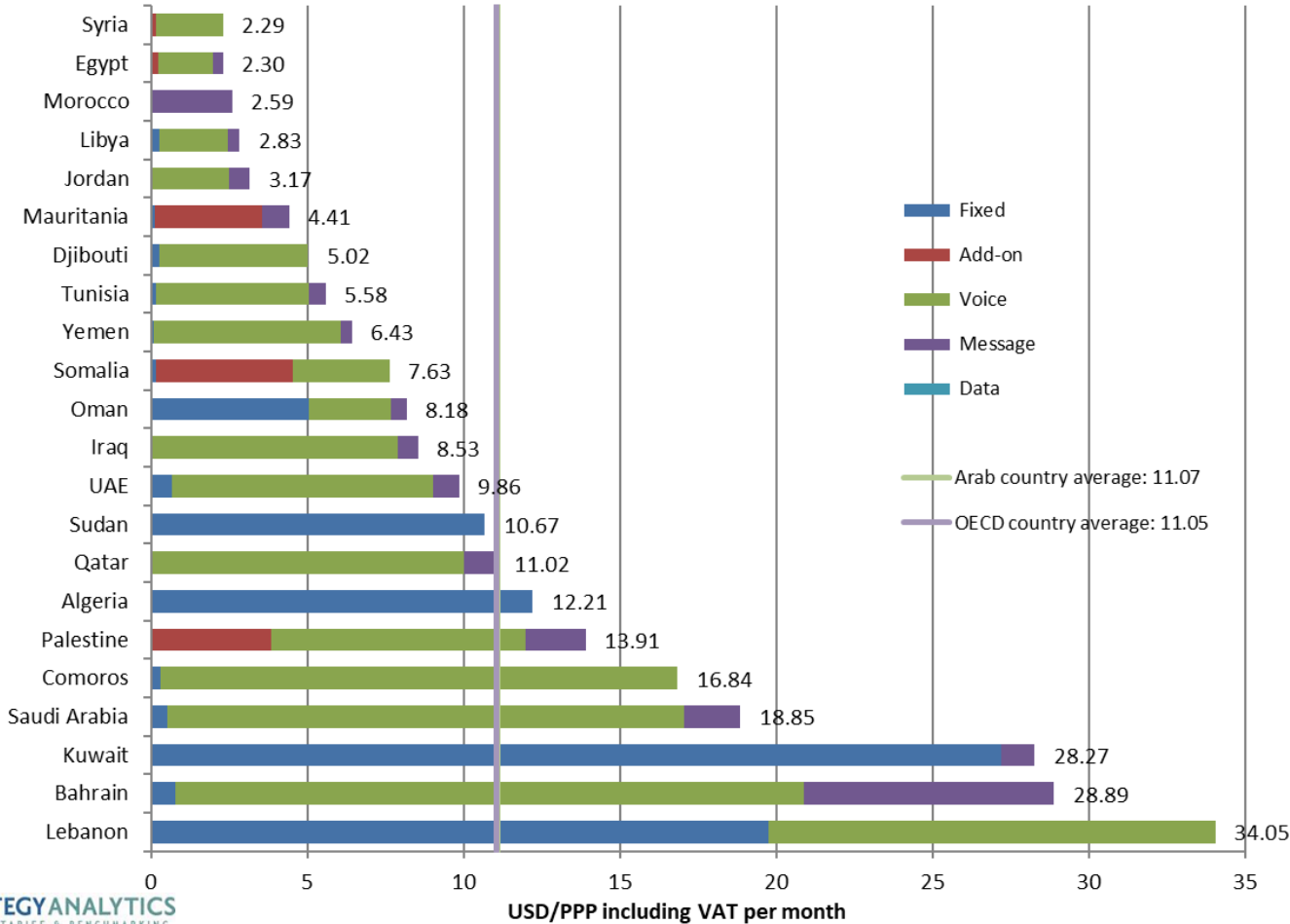


30 CALLS/MONTH NO DATA BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

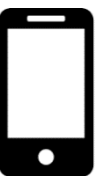
OECD 2017: 30 calls, no data



Please note:
Selective discounts included.

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

18 country results are based on prepaid tariffs

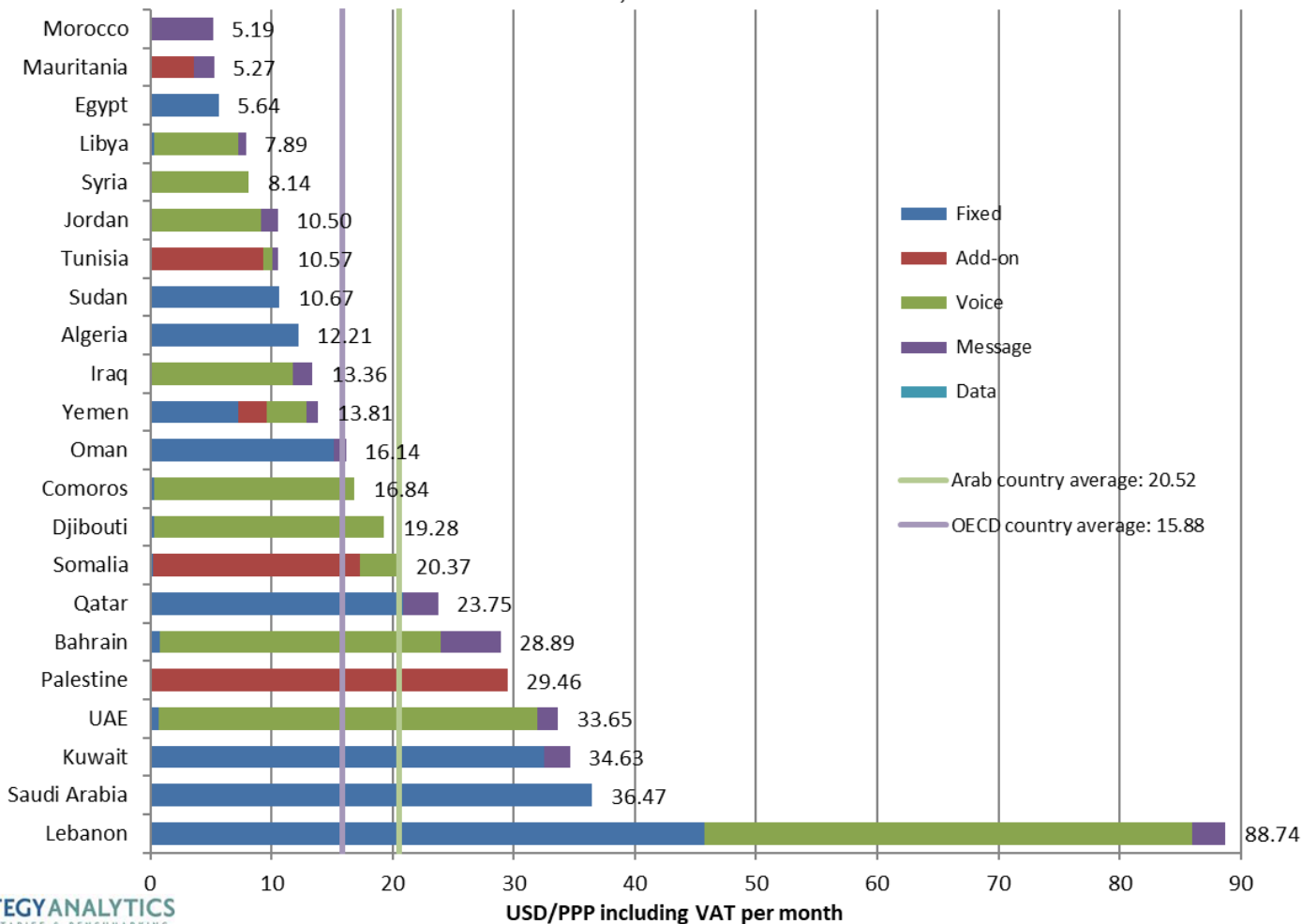


100 CALLS/MONTH NO DATA BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

OECD 2017: 100 calls, no data



Please note:
Selective discounts included.

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

15 country results are based on prepaid tariffs

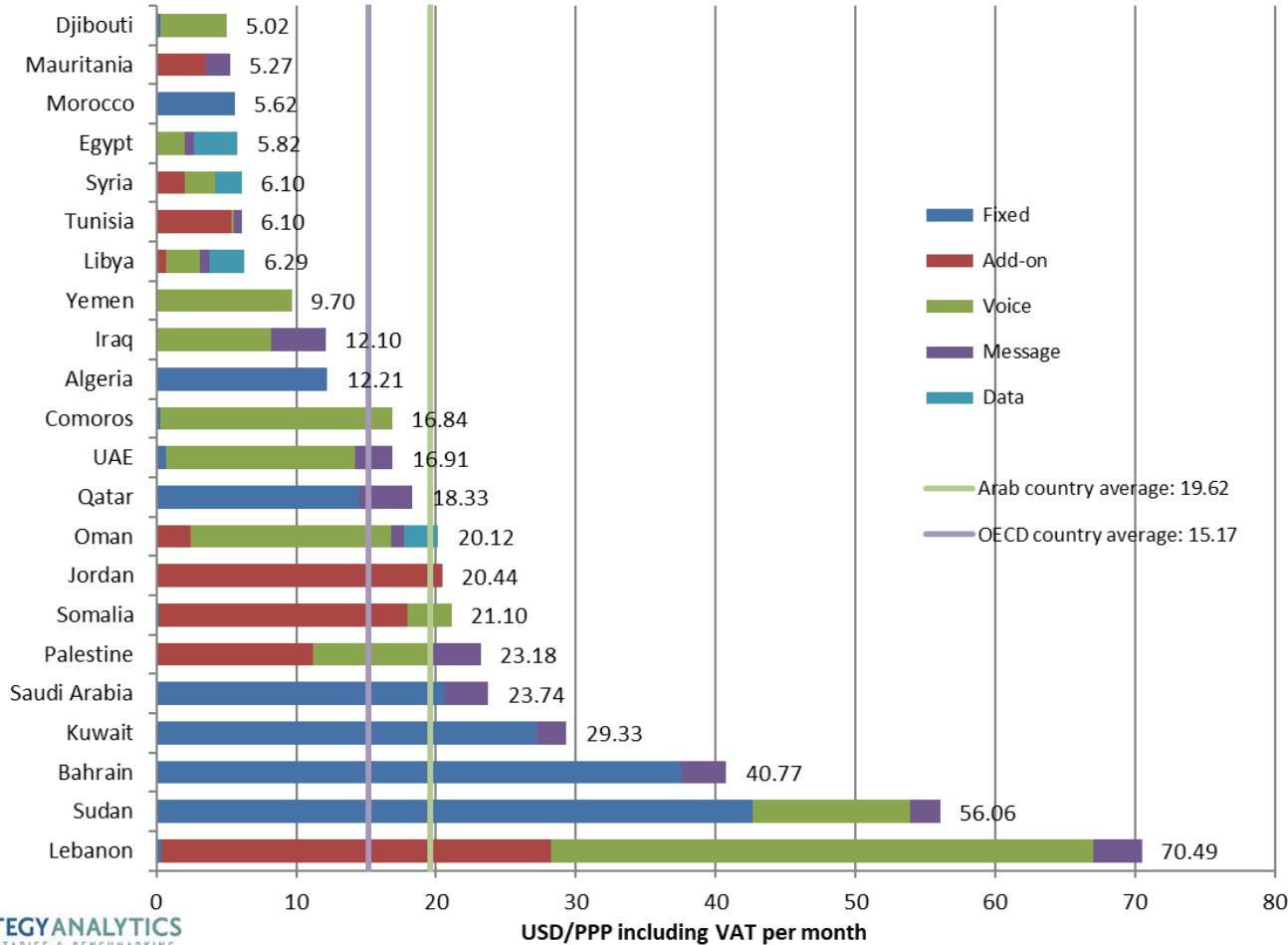


30 CALLS AND 0.1GB/MONTH, RESIDENTIAL BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

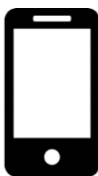
OECD 2017: 30 calls, 0.1 GB



Please note:
Selective discounts included.

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

20 country results are based on prepaid tariffs

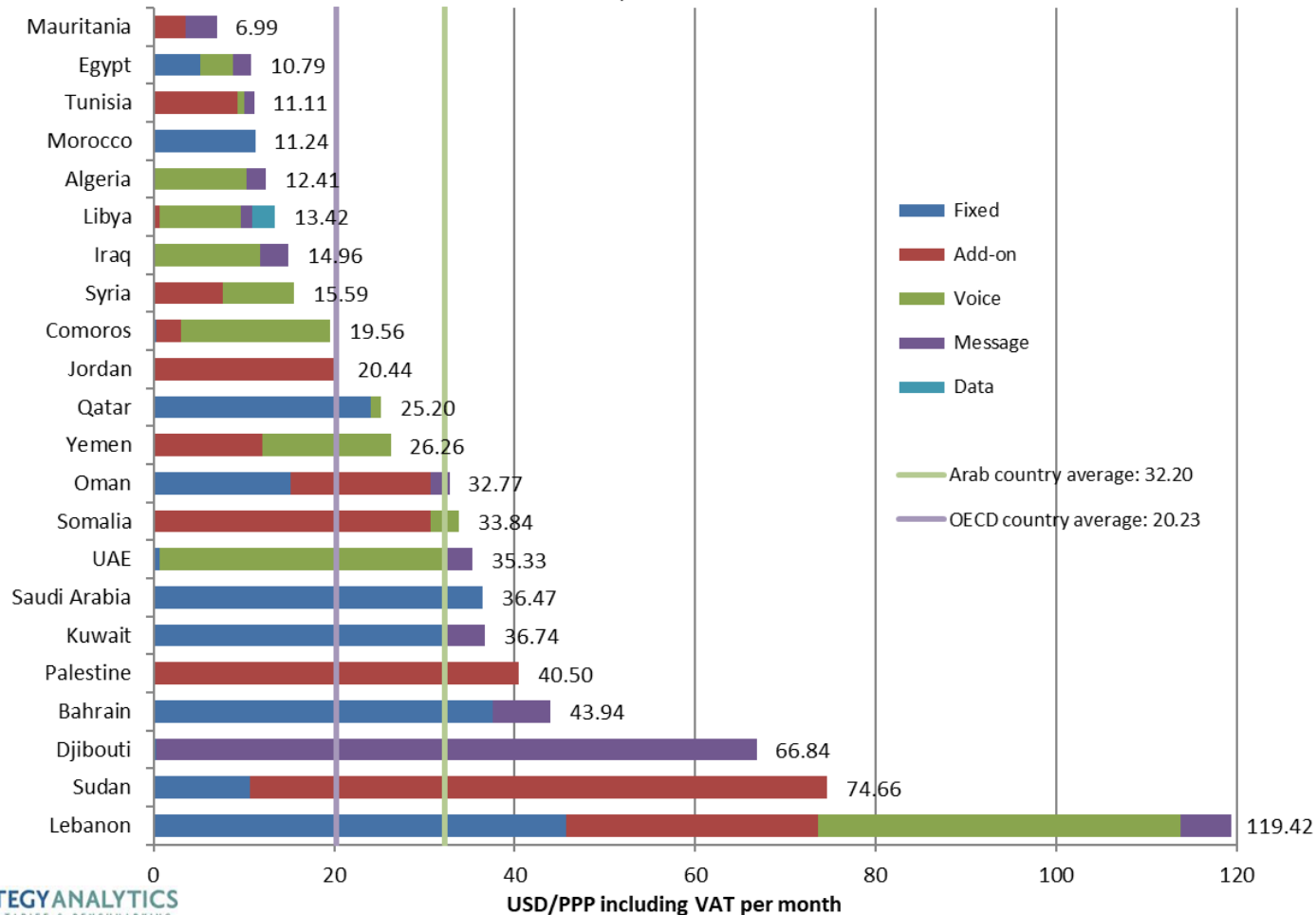


100 CALLS AND 0.5GB/MONTH, RESIDENTIAL BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

OECD 2017: 100 calls, 0.5 GB



Please note:
Selective discounts included.

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

17 country results are based on prepaid tariffs

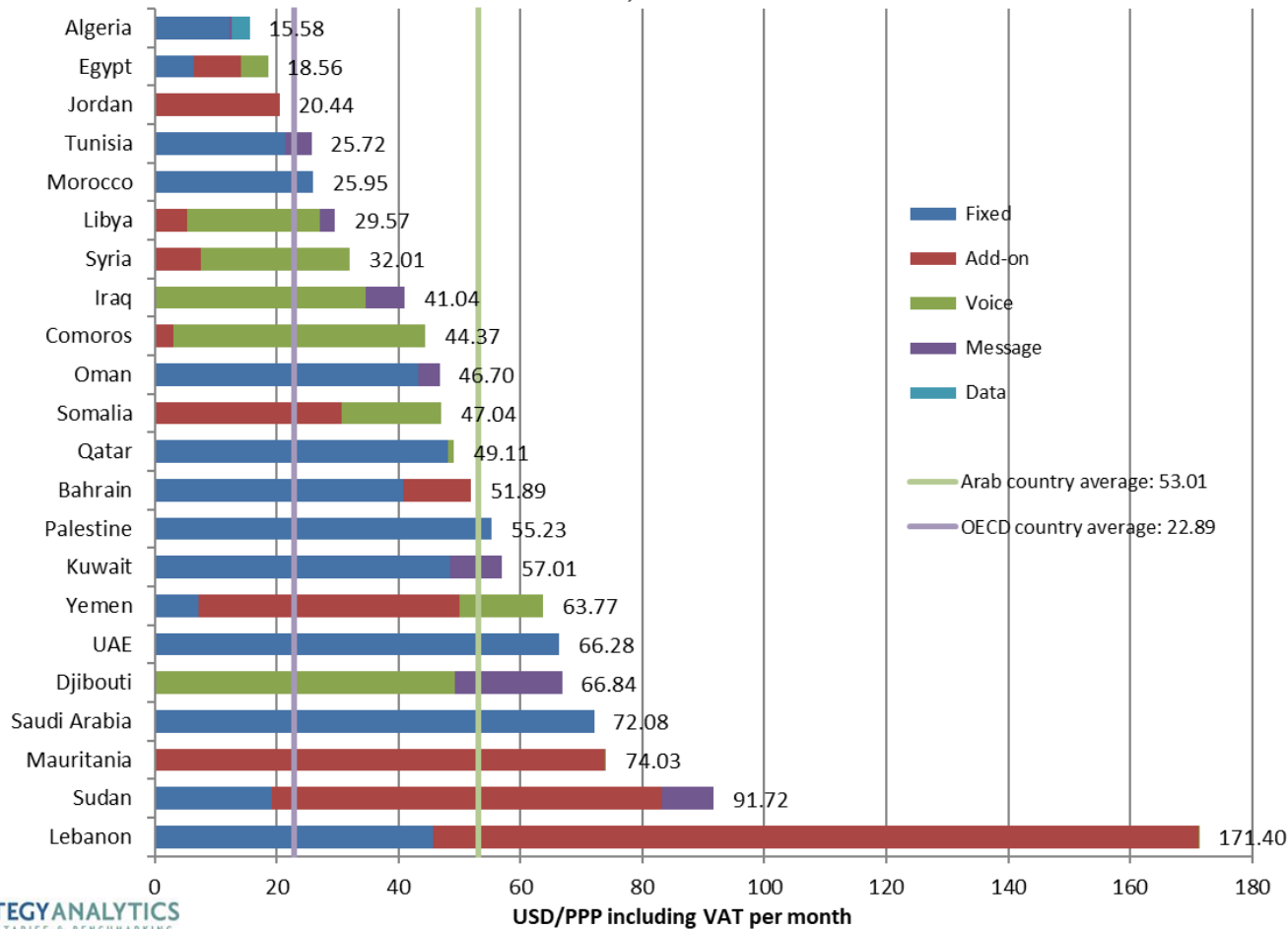


300 CALLS AND 1GB/MONTH, RESIDENTIAL BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

OECD 2017: 300 calls, 1 GB



Please note:
Selective discounts included.

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

12 country results are based on prepaid tariffs

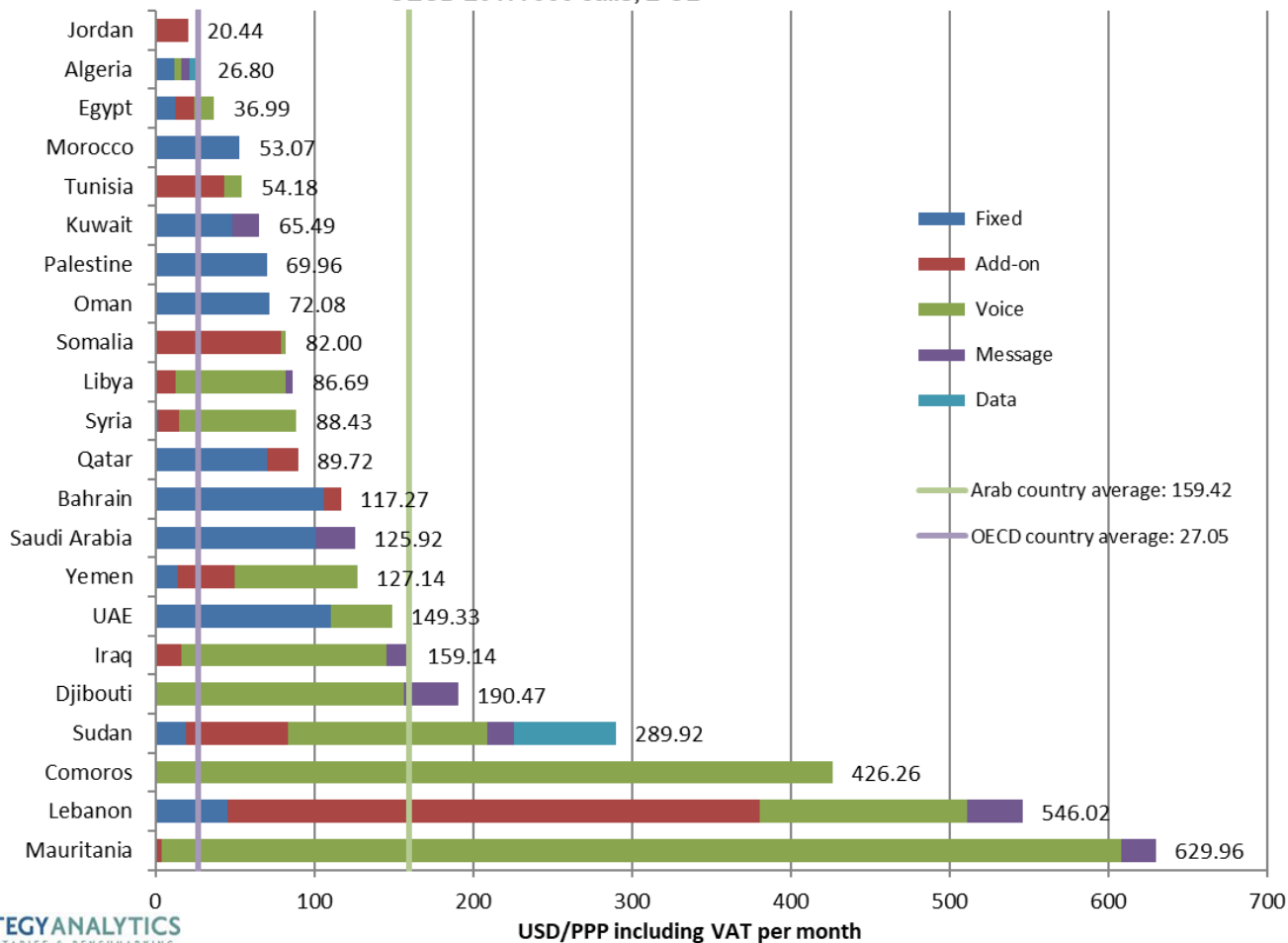


900 CALLS AND 2GB/MONTH, RESIDENTIAL BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

OECD 2017: 900 calls, 2 GB



Please note:
Selective discounts included.

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

8 country results are based on prepaid tariffs

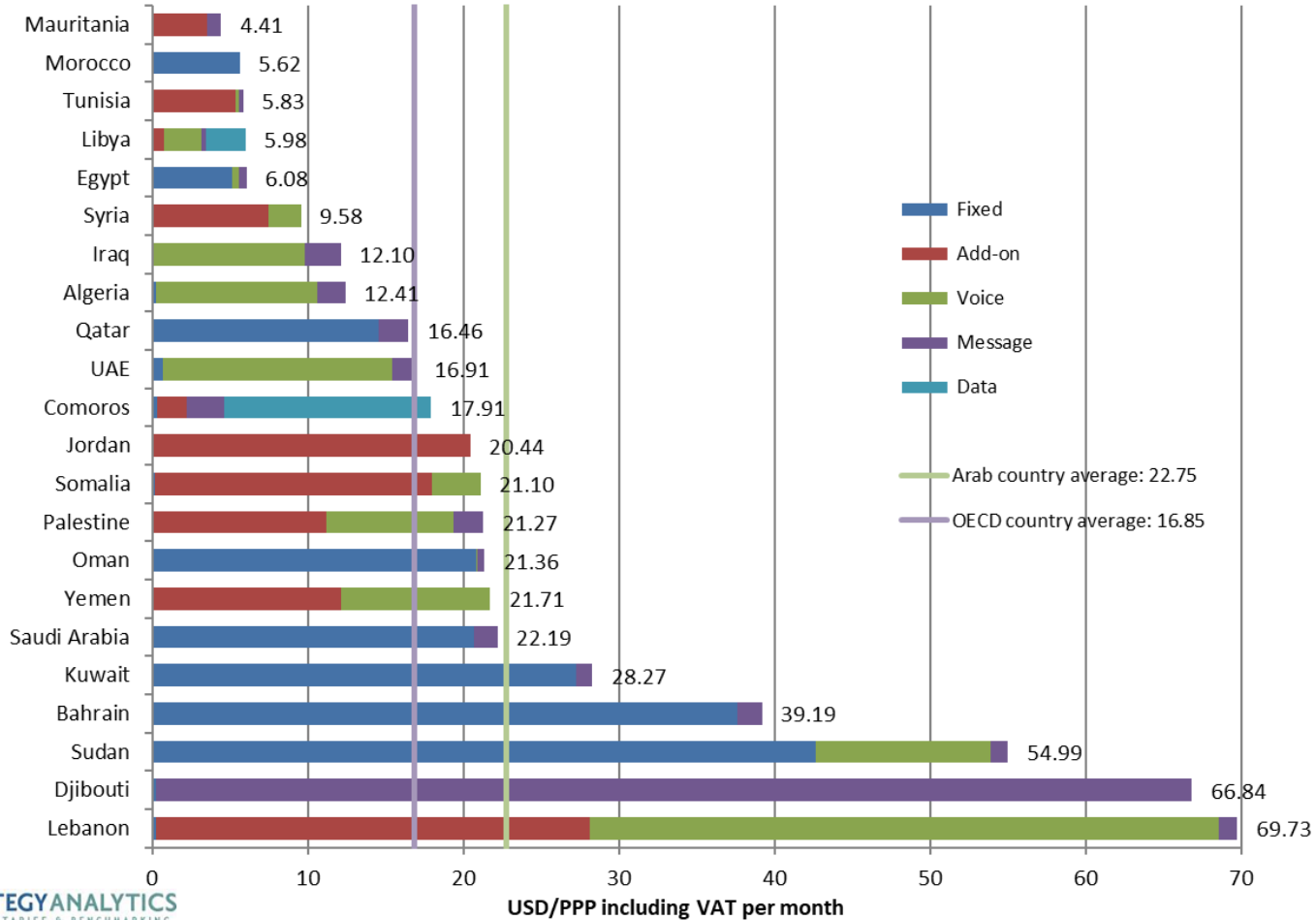


30 CALLS AND 0.5GB/MONTH, RESIDENTIAL BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

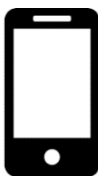
OECD 2017: 30 calls, 0.5 GB



Please note:
Selective discounts included.

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

20 country results are based on prepaid tariffs

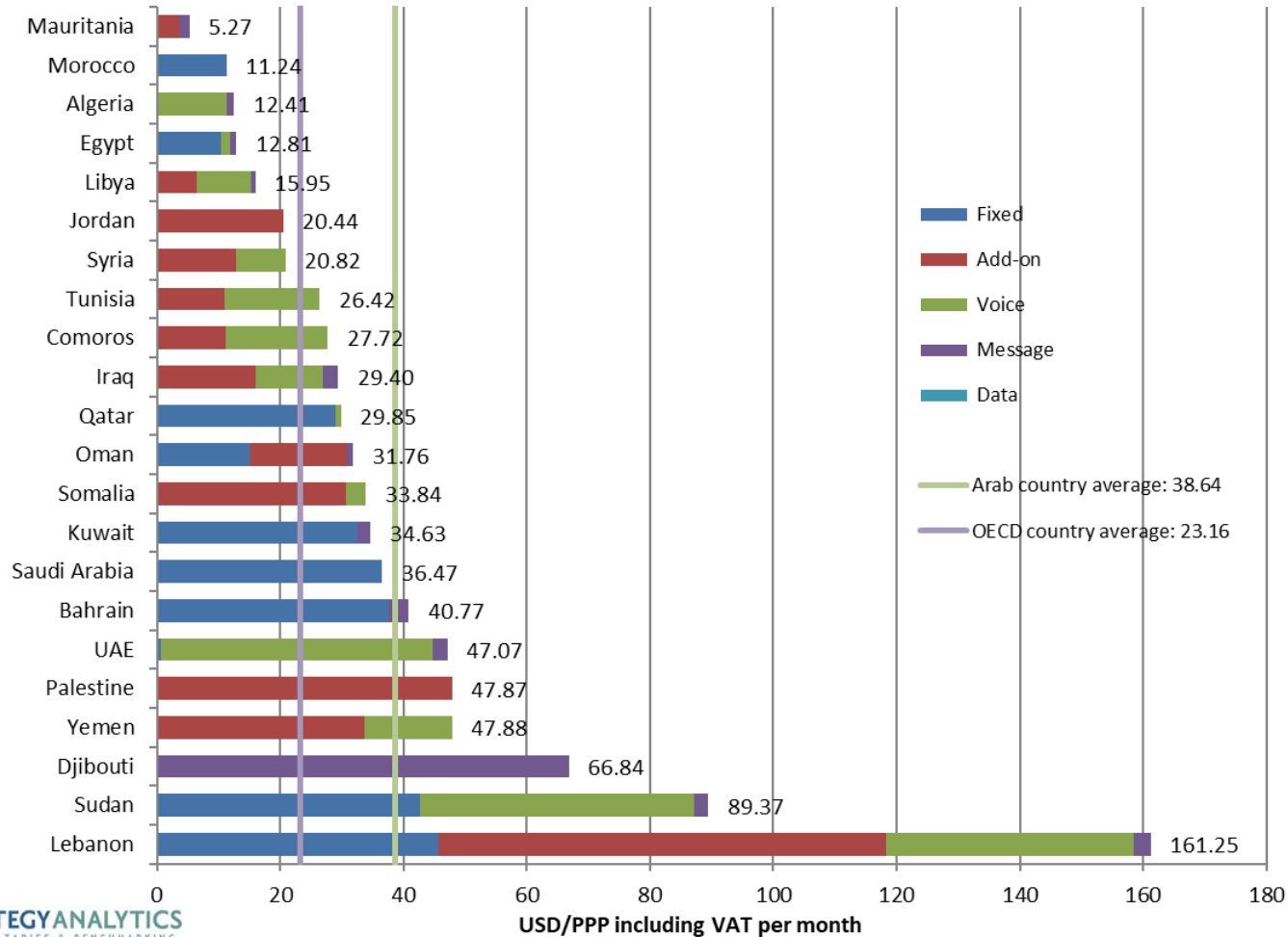


100 CALLS AND 2GB/MONTH, RESIDENTIAL BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

OECD 2017: 100 calls, 2 GB



Please note:
Selective discounts included.

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

17 country results are based on prepaid tariffs

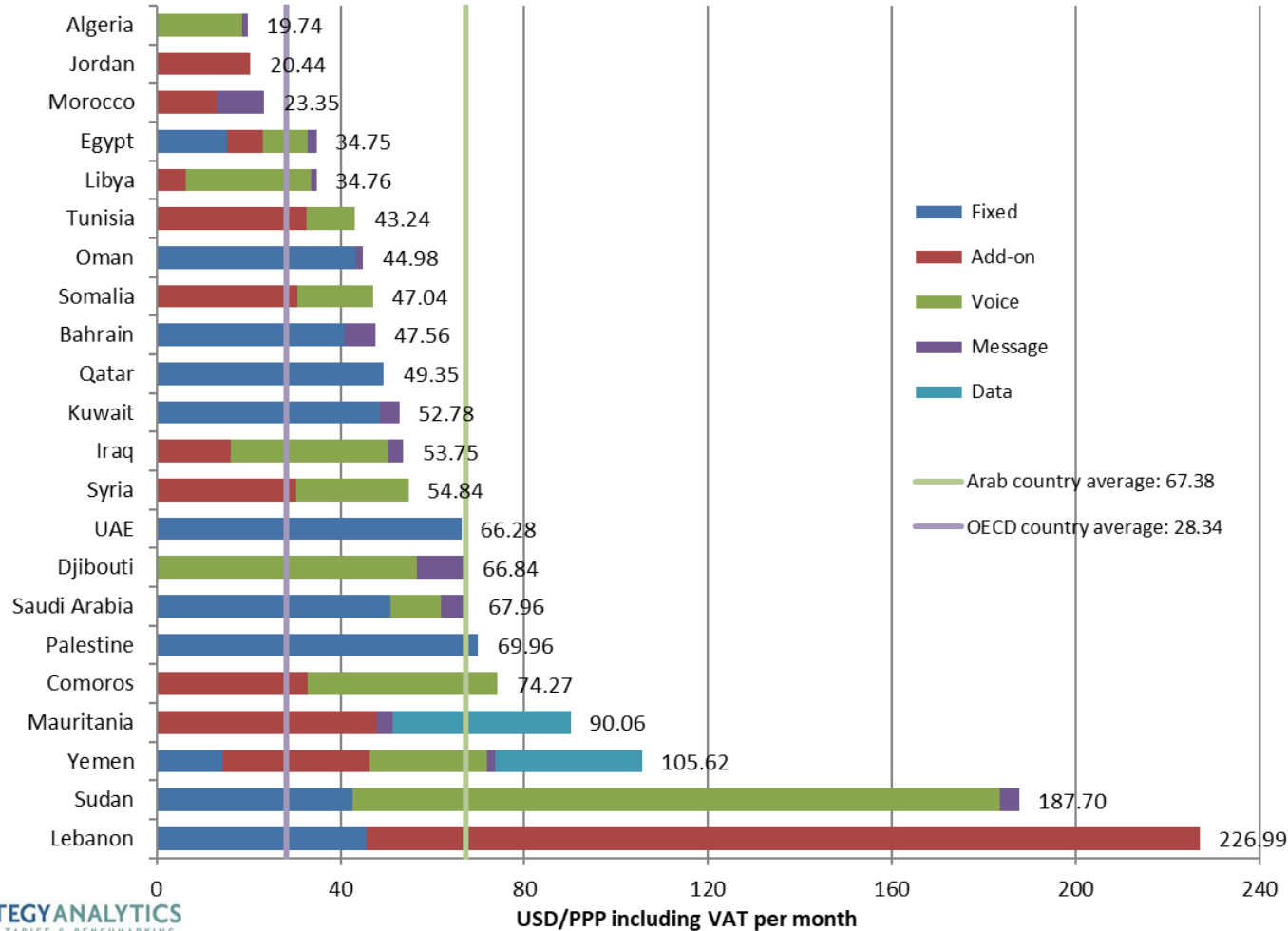


300 CALLS AND 5GB/MONTH, RESIDENTIAL BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

OECD 2017: 300 calls, 5 GB



Please note:
Selective discounts included.

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

13 country results are based on prepaid tariffs

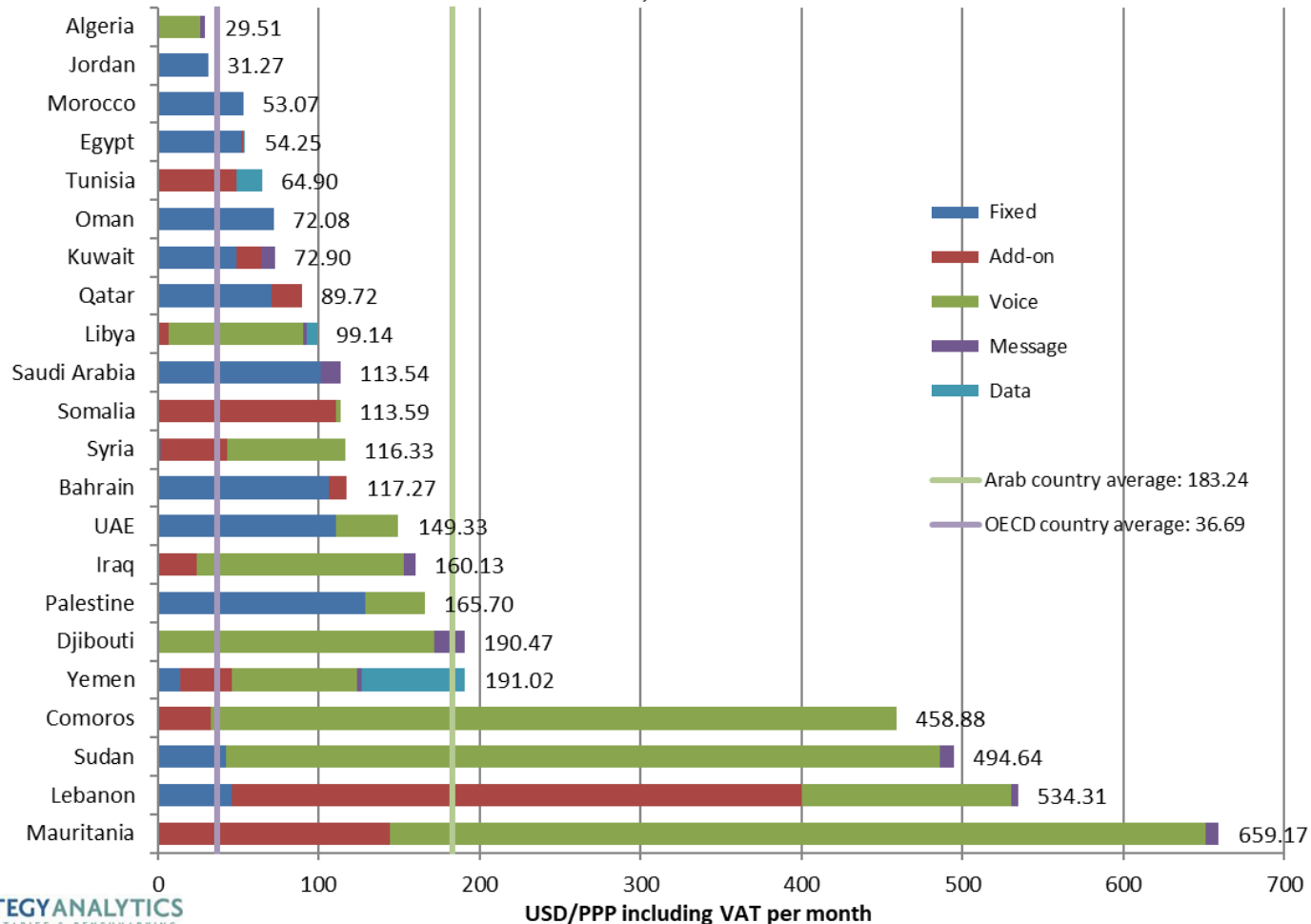


900 CALLS AND 10GB/MONTH, RESIDENTIAL BASED ON 2017 OECD MOBILE VOICE AND DATA BASKET



AREGNET Mobile Voice and Data Price Benchmarking 2021

OECD 2017: 900 calls, 10 GB



Please note:
Selective discounts included.

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

9 country results are based on prepaid tariffs





OBSERVATIONS FROM MOBILE BASKET RESULTS

	Cheapest			Most expensive		
	1st	2nd	3rd	1st	2nd	3rd
30 calls no data	Syria	Egypt	Morocco	Lebanon	Bahrain	Kuwait
100 calls no data	Morocco	Mauritania	Egypt	Lebanon	Saudi Arabia	Kuwait
30 calls, 0.1 GB	Djibouti	Mauritania	Morocco	Lebanon	Sudan	Bahrain
100 calls, 0.5 GB	Mauritania	Egypt	Tunisia	Lebanon	Sudan	Djibouti
300 calls, 1 GB	Algeria	Egypt	Jordan	Lebanon	Sudan	Mauritania
900 calls, 2 GB	Jordan	Algeria	Egypt	Mauritania	Lebanon	Comoros
30 calls, 0.5 GB	Mauritania	Morocco	Tunisia	Lebanon	Djibouti	Sudan
100 calls, 2 GB	Mauritania	Morocco	Algeria	Lebanon	Sudan	Djibouti
300 calls, 5 GB	Algeria	Jordan	Morocco	Lebanon	Sudan	Yemen
900 calls, 10 GB	Algeria	Jordan	Morocco	Mauritania	Lebanon	Sudan

- The table shows the cheapest three and most expensive three countries for each basket.
- While there is variation in the three cheapest/three most expensive countries, for some baskets, some countries feature consistently.
- Algeria, Egypt, Jordan, Mauritania and Morocco feature regularly among the three cheapest, while Lebanon and Sudan appear among the three most expensive.





COMPARISON OF OECD AND ARAB AVERAGES

	USD PPP/month inc VAT	
	OECD average	Arab average
30 calls no data	11	11
100 calls no data	16	21
30 calls, 0.1 GB	15	20
100 calls, 0.5 GB	20	32
300 calls, 1 GB	23	53
900 calls, 2 GB	27	159
30 calls, 0.5 GB	17	23
100 calls, 2 GB	23	39
300 calls, 5 GB	28	67
900 calls, 10 GB	37	183

- The table shows the average monthly cost for residential and business baskets separately, for both the Arab countries and OECD countries, as well as the percentage that the Arab average is higher or lower than the OECD average.
- Apart from the 30 calls no data basket, where the Arab average is almost identical to the OECD average, the Arab average is consistently higher than the OECD average, with higher usage baskets being significantly more expensive.

	% that Arab average is higher or lower than OECD average
30 calls no data	0.2%
100 calls no data	29%
30 calls, 0.1 GB	29%
100 calls, 0.5 GB	59%
300 calls, 1 GB	132%
900 calls, 2 GB	489%
30 calls, 0.5 GB	35%
100 calls, 2 GB	67%
300 calls, 5 GB	138%
900 calls, 10 GB	399%





MOBILE TIME SERIES ANALYSIS AND RANKING TABLES 2017-2021

2017 OECD MOBILE BASKETS RANKING

30 CALLS/MONTH NO DATA



Results for Mobile Voice and Data: OECD 2017: 30 calls, no data basket, 2017-2021
Results in USD/PPP including VAT per month

	2017	2018	2019	2020	2021
Algeria	8.33	16.27	24.56	12.21	12.21
Bahrain	32.29	32.29	32.32	28.07	28.89
Comoros	16.84	16.84	16.84	16.84	16.84
Djibouti					5.02
Egypt	1.50	2.34	2.34	2.30	2.30
Iraq	8.19	8.19	8.19	8.53	8.53
Jordan	6.95	8.74	9.51	4.07	3.17
Kuwait	13.63	12.64	13.63	13.63	28.27
Lebanon	42.22	42.61	30.69	34.05	34.05
Libya	2.81	2.81	2.81	2.83	2.83
Mauritania	16.15	16.15	18.16	4.41	4.41
Morocco	2.59	2.59	2.59	2.59	2.59
Oman	14.07	14.20	14.20	7.79	8.18
Palestine	10.03	17.61	17.61	13.76	13.91
Qatar	11.31	9.96	10.10	12.62	11.02
Saudi Arabia	7.11	7.11	18.87	18.85	18.85
Somalia					7.63
Sudan					10.67
Syria	2.32	2.32	2.29	2.29	2.29
Tunisia	5.51	5.51	5.51	5.58	5.58
UAE	9.46	9.51	10.45	10.45	9.86
Yemen	6.37	6.43	6.43	6.43	6.43

Arab average	11.46	12.32	13.01	10.91	11.07
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	10	15	17	12	16
Bahrain	18	18	19	18	21
Comoros	17	16	13	16	18
Djibouti					7
Egypt	1	2	2	2	2
Iraq	9	8	7	10	12
Jordan	7	9	8	5	5
Kuwait	14	12	11	14	20
Lebanon	19	19	18	19	22
Libya	4	4	4	4	4
Mauritania	16	14	15	6	6
Morocco	3	3	3	3	3
Oman	15	13	12	9	11
Palestine	12	17	14	15	17
Qatar	13	11	9	13	15
Saudi Arabia	8	7	16	17	19
Somalia					10
Sudan					14
Syria	2	1	1	1	1
Tunisia	5	5	5	7	8
UAE	11	10	10	11	13
Yemen	6	6	6	8	9

■ Least expensive
■ Most expensive



2017 OECD MOBILE BASKETS RANKING

100 CALLS/MONTH NO DATA



Results for Mobile Voice and Data: OECD 2017: 100 calls, no data basket, 2017-2021
Results in USD/PPP including VAT per month

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	24.91	24.56	24.56	12.21	12.21
Bahrain	32.29	32.29	32.32	28.07	28.89
Comoros	27.87	27.87	16.84	16.84	16.84
Djibouti					19.28
Egypt	4.13	4.52	4.52	7.29	5.64
Iraq	19.81	20.29	13.44	13.44	13.36
Jordan	12.42	12.42	12.26	14.06	10.50
Kuwait	34.63	27.67	40.99	26.48	34.63
Lebanon	87.94	88.74	88.74	88.74	88.74
Libya	8.65	8.65	7.89	7.89	7.89
Mauritania	26.47	36.21	34.50	5.27	5.27
Morocco	5.19	5.19	5.19	5.19	5.19
Oman	26.56	26.69	26.69	15.38	16.14
Palestine	22.71	35.69	42.20	39.82	29.46
Qatar	26.58	26.58	18.23	18.85	23.75
Saudi Arabia	24.37	24.37	34.58	32.51	36.47
Somalia					20.37
Sudan					10.67
Syria	8.36	8.36	8.14	8.14	8.14
Tunisia	9.11	9.11	10.60	10.57	10.57
UAE	21.30	21.75	22.98	31.92	33.65
Yemen	14.24	14.24	14.24	14.24	13.81

	2017	2018	2019	2020	2021
Algeria	12	11	12	7	9
Bahrain	17	16	14	15	17
Comoros	16	15	9	12	13
Djibouti					14
Egypt	1	1	1	3	3
Iraq	8	8	7	8	10
Jordan	6	6	6	9	6
Kuwait	18	14	17	14	20
Lebanon	19	19	19	19	22
Libya	4	4	3	4	4
Mauritania	13	18	15	2	2
Morocco	2	2	2	1	1
Oman	14	13	13	11	12
Palestine	10	17	18	18	18
Qatar	15	12	10	13	16
Saudi Arabia	11	10	16	17	21
Somalia					15
Sudan					8
Syria	3	3	4	5	5
Tunisia	5	5	5	6	7
UAE	9	9	11	16	19
Yemen	7	7	8	10	11

Arab average	23.03	23.96	24.15	20.89	20.52
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Least expensive
 Most expensive



2017 OECD MOBILE BASKETS RANKING 30 CALLS AND 0.1GB DATA/MONTH



Results for Mobile Voice and Data: OECD 2017: 30 calls, 0.1 GB basket, 2017-2021
Results in USD/PPP including VAT per month

	2017	2018	2019	2020	2021
Algeria	16.86	24.56	24.56	12.21	12.21
Bahrain	35.02	35.02	37.23	37.28	40.77
Comoros	11.72	16.84	16.84	16.84	16.84
Djibouti					5.02
Egypt	4.88	5.56	5.56	5.82	5.82
Iraq	8.99	8.99	8.99	13.44	12.10
Jordan	12.09	22.35	10.53	20.44	20.44
Kuwait	22.86	22.86	28.59	26.48	29.33
Lebanon	65.31	65.91	59.78	70.49	70.49
Libya	5.03	6.29	6.29	6.29	6.29
Mauritania	19.27	21.26	19.02	5.27	5.27
Morocco	6.49	12.54	12.54	12.54	5.62
Oman	14.07	14.20	20.58	20.12	20.12
Palestine	23.43	34.47	30.47	23.04	23.18
Qatar	23.62	24.81	13.81	13.39	18.33
Saudi Arabia	14.48	14.48	22.19	22.19	23.74
Somalia					21.10
Sudan					56.06
Syria	4.42	4.42	6.10	6.10	6.10
Tunisia	6.07	6.07	6.10	6.10	6.10
UAE	10.17	10.17	11.72	11.72	16.91
Yemen	9.70	9.70	9.70	9.70	9.70

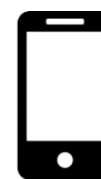
Arab average	16.55	18.97	18.45	17.87	19.62
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	13	15	15	8	10
Bahrain	18	18	18	18	20
Comoros	9	11	11	12	11
Djibouti					1
Egypt	2	2	1	2	4
Iraq	6	5	5	11	9
Jordan	10	13	7	14	15
Kuwait	15	14	16	17	19
Lebanon	19	19	19	19	22
Libya	3	4	4	5	7
Mauritania	14	12	12	1	2
Morocco	5	8	9	9	3
Oman	11	9	13	13	14
Palestine	16	17	17	16	17
Qatar	17	16	10	10	13
Saudi Arabia	12	10	14	15	18
Somalia					16
Sudan					21
Syria	1	1	2	3	5
Tunisia	4	3	3	4	6
UAE	8	7	8	7	12
Yemen	7	6	6	6	8

■ Least expensive
■ Most expensive



2017 OECD MOBILE BASKETS RANKING 100 CALLS AND 0.5GB DATA/MONTH



Results for Mobile Voice and Data: OECD 2017: 100 calls, 0.5 GB basket, 2017-2021
Results in USD/PPP including VAT per month

	2017	2018	2019	2020	2021
Algeria	29.58	24.56	24.56	13.68	12.41
Bahrain	48.14	48.14	40.56	44.36	43.94
Comoros	27.87	22.22	19.56	19.56	19.56
Djibouti					66.84
Egypt	10.29	6.43	6.43	8.64	10.79
Iraq	32.59	32.59	24.08	24.08	14.96
Jordan	18.77	23.84	14.31	20.44	20.44
Kuwait	36.74	40.37	40.99	26.48	36.74
Lebanon	98.62	99.52	119.42	119.42	119.42
Libya	16.59	20.39	12.95	13.58	13.42
Mauritania	26.47	36.21	37.92	6.99	6.99
Morocco	16.87	18.30	18.72	18.72	11.24
Oman	26.56	26.69	31.15	30.75	32.77
Palestine	44.36	57.34	62.82	54.70	40.50
Qatar	32.92	32.92	25.20	25.20	25.20
Saudi Arabia	36.02	36.02	36.60	32.51	36.47
Somalia					33.84
Sudan					74.66
Syria	14.43	14.43	15.59	15.59	15.59
Tunisia	10.19	10.19	11.14	11.11	11.11
UAE	40.14	23.43	33.51	33.51	35.33
Yemen	24.48	24.10	24.10	26.26	26.26

Arab average	31.14	31.46	31.56	28.71	32.20
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	11	10	10	5	5
Bahrain	18	17	16	17	19
Comoros	10	6	7	8	9
Djibouti					20
Egypt	2	1	1	2	2
Iraq	12	12	8	10	7
Jordan	6	8	4	9	10
Kuwait	15	16	17	13	17
Lebanon	19	19	19	19	22
Libya	4	5	3	4	6
Mauritania	8	15	15	1	1
Morocco	5	4	6	7	4
Oman	9	11	12	14	13
Palestine	17	18	18	18	18
Qatar	13	13	11	11	11
Saudi Arabia	14	14	14	15	16
Somalia					14
Sudan					21
Syria	3	3	5	6	8
Tunisia	1	2	2	3	3
UAE	16	7	13	16	15
Yemen	7	9	9	12	12

■ Least expensive
■ Most expensive



2017 OECD MOBILE BASKETS RANKING 300 CALLS AND 1GB DATA/MONTH



Results for Mobile Voice and Data: OECD 2017: 300 calls, 1 GB basket, 2017-2021
Results in USD/PPP including VAT per month

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	34.61	34.61	24.56	15.58	15.58
Bahrain	53.57	53.57	51.42	56.25	51.89
Comoros	127.42	108.39	44.37	44.37	44.37
Djibouti					66.84
Egypt	16.49	10.94	10.94	17.27	18.56
Iraq	89.25	91.17	45.36	45.36	41.04
Jordan	19.76	25.89	18.40	20.44	20.44
Kuwait	69.66	69.66	69.66	54.49	57.01
Lebanon	180.72	182.37	171.40	171.40	171.40
Libya	39.20	39.83	28.94	29.57	29.57
Mauritania	62.12	152.17	74.03	74.03	74.03
Morocco	25.69	25.69	26.62	29.00	25.95
Oman	66.44	66.58	91.30	46.70	46.70
Palestine	92.05	117.82	93.39	70.06	55.23
Qatar	68.32	68.32	48.15	49.11	49.11
Saudi Arabia	81.82	82.08	59.35	65.03	72.08
Somalia					47.04
Sudan					91.72
Syria	30.97	30.97	32.01	32.01	32.01
Tunisia	25.72	25.72	25.72	25.72	25.72
UAE	66.28	66.28	69.60	66.28	66.28
Yemen	61.84	61.24	56.63	63.77	63.77

	2017	2018	2019	2020	2021
Algeria	6	6	3	1	1
Bahrain	8	8	11	13	13
Comoros	18	16	8	8	9
Djibouti					18
Egypt	1	1	1	2	2
Iraq	16	15	9	9	8
Jordan	2	4	2	3	3
Kuwait	14	13	15	12	15
Lebanon	19	19	19	19	22
Libya	7	7	6	6	6
Mauritania	10	18	16	18	20
Morocco	3	2	5	5	5
Oman	12	11	17	10	10
Palestine	17	17	18	17	14
Qatar	13	12	10	11	12
Saudi Arabia	15	14	13	15	19
Somalia					11
Sudan					21
Syria	5	5	7	7	7
Tunisia	4	3	4	4	4
UAE	11	10	14	16	17
Yemen	9	9	12	14	16

Arab average	63.79	69.12	54.83	51.39	53.01
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Least expensive
 Most expensive



2017 OECD MOBILE BASKETS RANKING 900 CALLS AND 2GB DATA/MONTH



Results for Mobile Voice and Data: OECD 2017: 900 calls, 2 GB basket, 2017-2021
Results in USD/PPP including VAT per month

	2017	2018	2019	2020	2021
Algeria	60.39	83.31	36.84	26.80	26.80
Bahrain	113.46	113.46	117.27	117.27	117.27
Comoros	454.80	461.16	426.26	426.26	426.26
Djibouti					190.47
Egypt	38.28	21.88	21.88	37.24	36.99
Iraq	325.44	325.44	167.12	159.14	159.14
Jordan	31.27	31.06	22.31	20.44	20.44
Kuwait	132.38	149.33	149.33	95.32	65.49
Lebanon	541.10	546.02	546.02	546.02	546.02
Libya	144.84	104.20	78.46	86.69	86.69
Mauritania	645.17	582.52	667.15	629.96	629.96
Morocco	51.63	51.63	53.28	53.07	53.07
Oman	163.64	163.64	149.81	72.08	72.08
Palestine	250.76	290.88	148.43	187.80	69.96
Qatar	120.11	120.11	96.30	73.12	89.72
Saudi Arabia	193.12	199.40	143.43	97.64	125.92
Somalia					82.00
Sudan					289.92
Syria	83.96	83.96	77.80	77.80	88.43
Tunisia	59.78	59.78	59.78	54.18	54.18
UAE	146.91	149.33	156.80	149.33	149.33
Yemen	140.25	140.07	130.33	126.23	127.14

Arab average	194.59	193.54	170.98	159.81	159.42
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	5	5	3	2	2
Bahrain	7	8	9	12	13
Comoros	17	17	17	17	20
Djibouti					18
Egypt	2	1	1	3	3
Iraq	16	16	16	15	17
Jordan	1	2	2	1	1
Kuwait	9	11	13	10	6
Lebanon	18	18	18	18	21
Libya	11	7	7	9	10
Mauritania	19	19	19	19	22
Morocco	3	3	4	4	4
Oman	13	13	14	6	8
Palestine	15	15	12	16	7
Qatar	8	9	8	7	12
Saudi Arabia	14	14	11	11	14
Somalia					9
Sudan					19
Syria	6	6	6	8	11
Tunisia	4	4	5	5	5
UAE	12	12	15	14	16
Yemen	10	10	10	13	15

■ Least expensive
■ Most expensive



2017 OECD MOBILE BASKETS RANKING

30 CALLS + 0.5GB DATA/MONTH



Results for Mobile Voice and Data: OECD 2017: 30 calls, 0.5 GB basket, 2017-2021
Results in USD/PPP including VAT per month

	2017	2018	2019	2020	2021
Algeria	15.66	24.56	24.56	13.68	12.41
Bahrain	33.61	33.61	35.57	35.62	39.19
Comoros	27.87	13.82	17.91	17.91	17.91
Djibouti					66.84
Egypt	7.57	6.43	6.43	6.08	6.08
Iraq	27.27	27.27	24.08	24.08	12.10
Jordan	10.90	22.35	9.51	20.44	20.44
Kuwait	21.80	21.80	27.54	26.48	28.27
Lebanon	69.86	70.49	58.58	69.73	69.73
Libya	9.14	12.94	8.55	7.90	5.98
Mauritania	19.27	20.93	18.16	4.41	4.41
Morocco	9.08	12.71	13.28	13.41	5.62
Oman	14.07	14.20	20.10	19.76	21.36
Palestine	28.44	39.48	39.48	24.80	21.27
Qatar	27.29	27.29	13.99	14.60	16.46
Saudi Arabia	16.40	16.40	28.38	20.64	22.19
Somalia					21.10
Sudan					54.99
Syria	8.35	8.35	9.58	9.58	9.58
Tunisia	5.81	5.81	5.83	5.83	5.83
UAE	22.45	17.07	20.56	20.56	16.91
Yemen	24.16	23.53	20.12	21.71	21.71

Arab average	21.00	22.06	21.17	19.85	22.75
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	8	14	14	7	8
Bahrain	18	17	17	18	19
Comoros	16	6	8	9	11
Djibouti					21
Egypt	2	2	2	3	5
Iraq	14	15	13	15	7
Jordan	6	12	4	11	12
Kuwait	11	11	15	17	18
Lebanon	19	19	19	19	22
Libya	5	5	3	4	4
Mauritania	10	10	9	1	1
Morocco	4	4	6	6	2
Oman	7	7	10	10	15
Palestine	17	18	18	16	14
Qatar	15	16	7	8	9
Saudi Arabia	9	8	16	13	17
Somalia					13
Sudan					20
Syria	3	3	5	5	6
Tunisia	1	1	1	2	3
UAE	12	9	12	12	10
Yemen	13	13	11	14	16

■ Least expensive
■ Most expensive



2017 OECD MOBILE BASKETS RANKING 100 CALLS + 2GB DATA/MONTH



Results for Mobile Voice and Data: OECD 2017: 100 calls, 2 GB basket, 2017-2021

Results in USD/PPP including VAT per month

	2017	2018	2019	2020	2021
Algeria	32.24	24.98	24.56	17.71	12.41
Bahrain	45.11	45.11	37.23	40.98	40.77
Comoros	37.05	17.11	27.72	27.72	27.72
Djibouti					66.84
Egypt	17.97	14.16	14.16	7.67	12.81
Iraq	54.93	54.93	36.25	29.40	29.40
Jordan	19.76	25.89	12.26	20.44	20.44
Kuwait	34.63	40.99	40.99	26.48	34.63
Lebanon	159.80	152.51	161.25	161.25	161.25
Libya	65.46	24.82	12.32	19.75	15.95
Mauritania	180.43	88.36	36.20	5.27	5.27
Morocco	11.68	18.16	18.16	18.16	11.24
Oman	70.45	43.25	35.00	39.40	31.76
Palestine	146.25	146.25	77.54	61.91	47.87
Qatar	47.45	57.97	29.85	29.85	29.85
Saudi Arabia	49.91	49.91	36.60	32.51	36.47
Somalia					33.84
Sudan					89.37
Syria	16.55	16.55	20.82	20.82	20.82
Tunisia	30.30	23.13	30.30	26.42	26.42
UAE	66.28	21.75	58.12	55.39	47.07
Yemen	54.35	52.71	50.76	47.88	47.88

Arab average	60.03	48.34	40.00	36.26	38.64
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	6	8	6	3	3
Bahrain	9	12	14	15	16
Comoros	8	3	7	10	9
Djibouti					20
Egypt	3	1	3	2	4
Iraq	13	15	12	11	10
Jordan	4	9	1	6	6
Kuwait	7	10	15	9	14
Lebanon	18	19	19	19	22
Libya	14	7	2	5	5
Mauritania	19	17	11	1	1
Morocco	1	4	4	4	2
Oman	16	11	10	14	12
Palestine	17	18	18	18	18
Qatar	10	16	8	12	11
Saudi Arabia	11	13	13	13	15
Somalia					13
Sudan					21
Syria	2	2	5	7	7
Tunisia	5	6	9	8	8
UAE	15	5	17	17	17
Yemen	12	14	16	16	19

■ Least expensive
■ Most expensive



2017 OECD MOBILE BASKETS RANKING

300 CALLS + 5GB DATA/MONTH



Results for Mobile Voice and Data: OECD 2017: 300 calls, 5 GB basket, 2017-2021
Results in USD/PPP including VAT per month

	2017	2018	2019	2020	2021
Algeria	60.39	42.76	24.56	24.56	19.74
Bahrain	49.34	49.34	46.98	50.89	47.56
Comoros	191.94	105.13	74.27	74.27	74.27
Djibouti					66.84
Egypt	31.34	25.74	25.74	16.65	34.75
Iraq	165.18	143.84	87.97	61.73	53.75
Jordan	31.27	31.06	22.31	20.44	20.44
Kuwait	69.66	69.66	69.66	54.49	52.78
Lebanon	224.94	226.99	226.99	226.99	226.99
Libya	226.70	178.46	27.67	44.26	34.76
Mauritania	294.81	276.35	90.06	90.06	90.06
Morocco	38.66	23.35	23.35	23.35	23.35
Oman	93.00	91.30	91.30	44.98	44.98
Palestine	250.76	290.88	109.72	70.06	69.96
Qatar	65.19	90.35	72.22	56.40	49.35
Saudi Arabia	72.13	72.39	72.21	65.03	67.96
Somalia					47.04
Sudan					187.70
Syria	38.39	38.39	54.84	54.84	54.84
Tunisia	91.22	107.17	91.22	43.24	43.24
UAE	66.28	71.00	74.55	66.28	66.28
Yemen	147.86	164.05	125.61	105.62	105.62

Arab average	116.27	110.43	74.28	62.85	67.38
--------------	--------	--------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	6	5	3	4	1
Bahrain	5	6	6	8	9
Comoros	15	12	11	16	18
Djibouti					15
Egypt	2	2	4	1	4
Iraq	14	14	13	12	12
Jordan	1	3	1	2	2
Kuwait	9	7	8	9	11
Lebanon	16	17	19	19	22
Libya	17	16	5	6	5
Mauritania	19	18	14	17	19
Morocco	4	1	2	3	3
Oman	12	11	16	7	7
Palestine	18	19	17	15	17
Qatar	7	10	10	11	10
Saudi Arabia	10	9	9	13	16
Somalia					8
Sudan					21
Syria	3	4	7	10	13
Tunisia	11	13	15	5	6
UAE	8	8	12	14	14
Yemen	13	15	18	18	20

■ Least expensive
■ Most expensive



2017 OECD MOBILE BASKETS RANKING 900 CALLS + 10GB DATA/MONTH



Results for Mobile Voice and Data: OECD 2017: 900 calls, 10 GB basket, 2017-2021
Results in USD/PPP including VAT per month

	2017	2018	2019	2020	2021
Algeria	60.39	83.31	60.26	36.44	29.51
Bahrain	121.30	121.30	117.27	117.27	117.27
Comoros	548.60	454.64	458.88	458.88	458.88
Djibouti					190.47
Egypt	90.31	77.21	77.21	69.58	54.25
Iraq	520.47	520.47	351.68	219.99	160.13
Jordan	44.29	44.29	31.24	37.32	31.27
Kuwait	132.38	140.86	140.86	93.93	72.90
Lebanon	546.08	551.04	534.31	534.31	534.31
Libya	522.12	473.88	75.93	102.30	99.14
Mauritania	642.18	644.31	659.17	659.17	659.17
Morocco	103.53	103.53	53.28	53.07	53.07
Oman	163.64	163.64	149.81	72.08	72.08
Palestine	250.76	290.88	290.88	293.83	165.70
Qatar	162.11	154.08	120.37	87.30	89.72
Saudi Arabia	206.41	212.60	143.43	105.80	113.54
Somalia					113.59
Sudan					494.64
Syria	99.59	99.59	116.33	116.33	116.33
Tunisia	187.12	187.12	218.63	64.90	64.90
UAE	146.91	162.61	167.20	149.33	149.33
Yemen	285.76	320.49	241.29	190.29	191.02

Arab average	254.42	252.94	210.95	182.22	183.24
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	2	3	3	1	1
Bahrain	6	6	7	12	13
Comoros	18	15	17	17	19
Djibouti					17
Egypt	3	2	5	5	4
Iraq	15	17	16	15	15
Jordan	1	1	1	2	2
Kuwait	7	7	9	8	7
Lebanon	17	18	18	18	21
Libya	16	16	4	9	9
Mauritania	19	19	19	19	22
Morocco	5	5	2	3	3
Oman	10	10	11	6	6
Palestine	13	13	15	16	16
Qatar	9	8	8	7	8
Saudi Arabia	12	12	10	10	10
Somalia					11
Sudan					20
Syria	4	4	6	11	12
Tunisia	11	11	13	4	5
UAE	8	9	12	13	14
Yemen	14	14	14	14	18

■ Least expensive
■ Most expensive





OBSERVATIONS FROM MOBILE TIME SERIES RESULTS

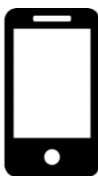
- There has been a general mix of decreases and increases over the period 2020 to 2021. , the predominant change is one of decreasing prices, most notably for the higher data baskets. The overall average has been impacted by the removal of historical data for Sudan due to the currency devaluation in 2021, making time comparison difficult for this market.

Change in overall average

2020-2021

30 calls no data	↑	1%
100 calls no data	↓	-2%
30 calls, 0.1 GB	↑	10%
100 calls, 0.5 GB	↑	12%
300 calls, 1 GB	↑	3%
900 calls, 2 GB	↓	0%
30 calls, 0.5 GB	↑	15%
100 calls, 2 GB	↑	7%
300 calls, 5 GB	↑	7%
900 calls, 10 GB	↑	1%

- Most providers made changes to mobile pricing, and in particular to data allowances. Some of the changes that were observed include, but are not limited to the following (note: the changes are detailed at a country rather than operator level):
 - Bahrain: New 5G pricing, and change to data add-ons
 - Djibouti: complete change to all plans
 - Iraq: New data add-ons (both PAYG and pay monthly)
 - Jordan: allowance changes across plans
 - Morocco: New pay monthly plans
 - Oman: Data add-on changes, and increases to allowances. Changes to monthly rentals
 - Saudi Arabia: changes to data allowances and monthly rentals.





FIXED BROADBAND BASKET RESULTS 2021



FIXED BROADBAND BASKET METHODOLOGY

- Research covering 394 fixed broadband residential and business service offerings from the incumbent ISPs* in 21 Arab countries
- Costs are derived using the OECD broadband basket methodology, and are based on the baskets that were defined by OECD in 2017, which consider a number of speed ranges and usage levels (15 in total). The baskets are shown in the table below.
- The technologies included are DSL, Cable, Fibre and Wireless.
 - As of Q4 2021, 13 Arab countries and 33 OECD countries had broadband services >1000 Mb/s
 - Costs are shown separately for both residential and business services. Note, for business services \geq 1000 Mb/s, results are not shown, as offers are not available/published in most markets
- Total monthly cost calculated based on usage profiles, which are dependent on the speed of service, as shown below:

Minimum Download Speed (Mb/s)	Low alternative data volume (GB/month)	Medium data volume (GB/month)	High alternative data volume (GB/month)
0.256	5	15	45
10	10	30	90
25	20	60	180
100	40	120	360
1000	100	300	900

The OECD data shown refer to the incumbent ISP* fixed broadband services in 37 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

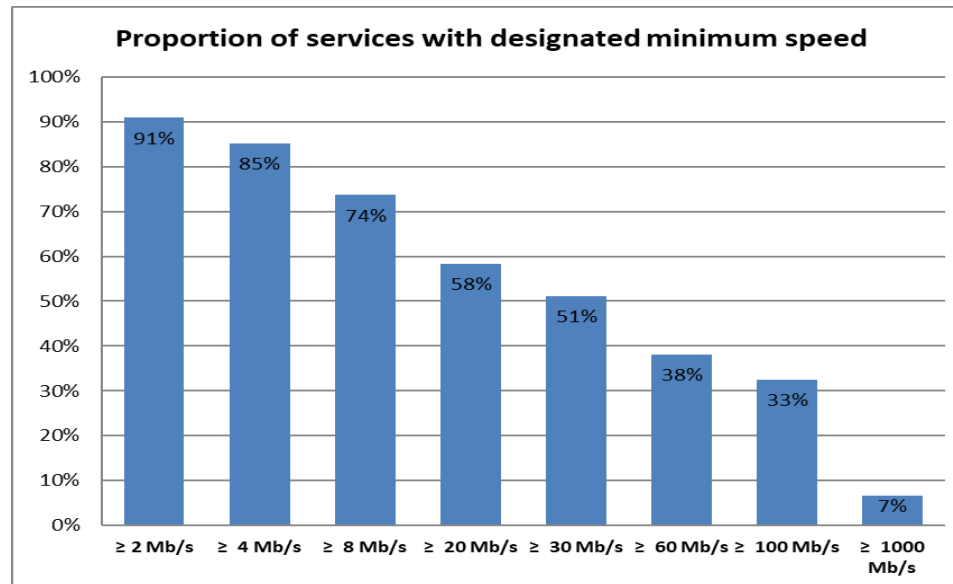
* **Incumbent ISP will normally mean the ISP owned by the incumbent operator in the country.**





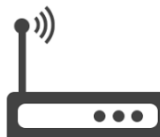
FIXED BROADBAND DATA ISSUES

- Price data is not available for broadband services in Somalia.
- It has not been possible to verify the prices for Yemen, and for continuity, prices have been left at the 2020 level.
- In general, speeds have continued to rise since 2020. The table below shows 91% of services have a minimum advertised download speed of 2 Mb/s or above, 51% of services are at least 30 Mb/s, and a third of plans are at least 100 Mb/s.



- Speeds above 2 Mb/s are available in all 21 countries covered. Five countries offer speeds over 1000Mb/s which is up one country from previous year. Due to very limited offers on speeds ≥ 1000 Mb/s for business services, results have not been included for this speed in the business analysis.
- The average speed for the Arab countries for the current update is just over 183 Mb/s, up from 70 Mb/s in 2020.

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.

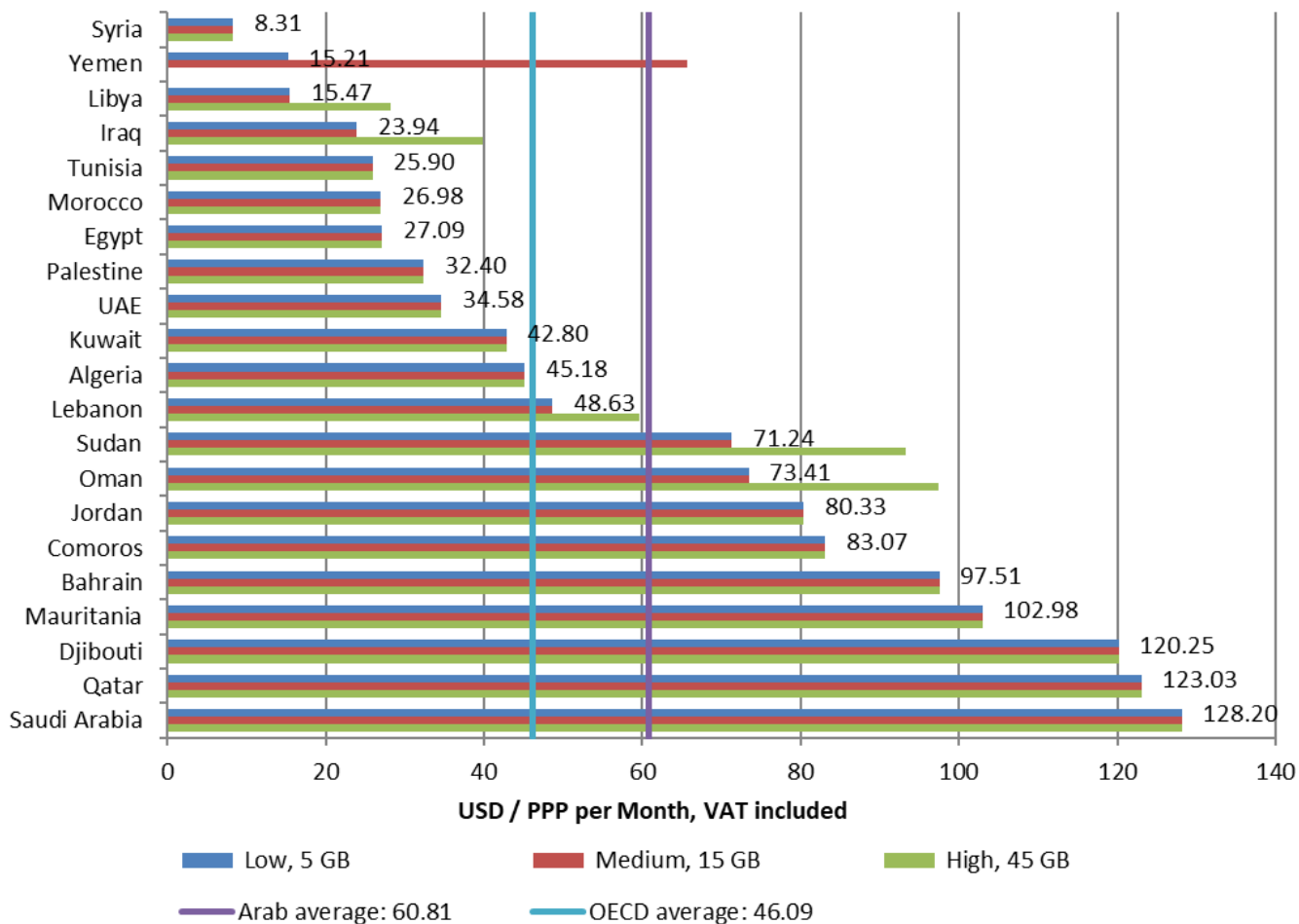


RESIDENTIAL FIXED BROADBAND VERY LOW SPEED OECD 2017 BASKET ≥ 0.25 MB/S



AREGNET Fixed Broadband Price Benchmarking 2021

OECD 2017: Residential Fixed Broadband ≥ 0.25 Mb/s, low, medium and high usage



Total monthly cost calculated based on three usage baskets:

Low usage: 5 GB
 Medium usage: 15 GB
 High usage: 45 GB.

Average lines are based on the medium usage basket.

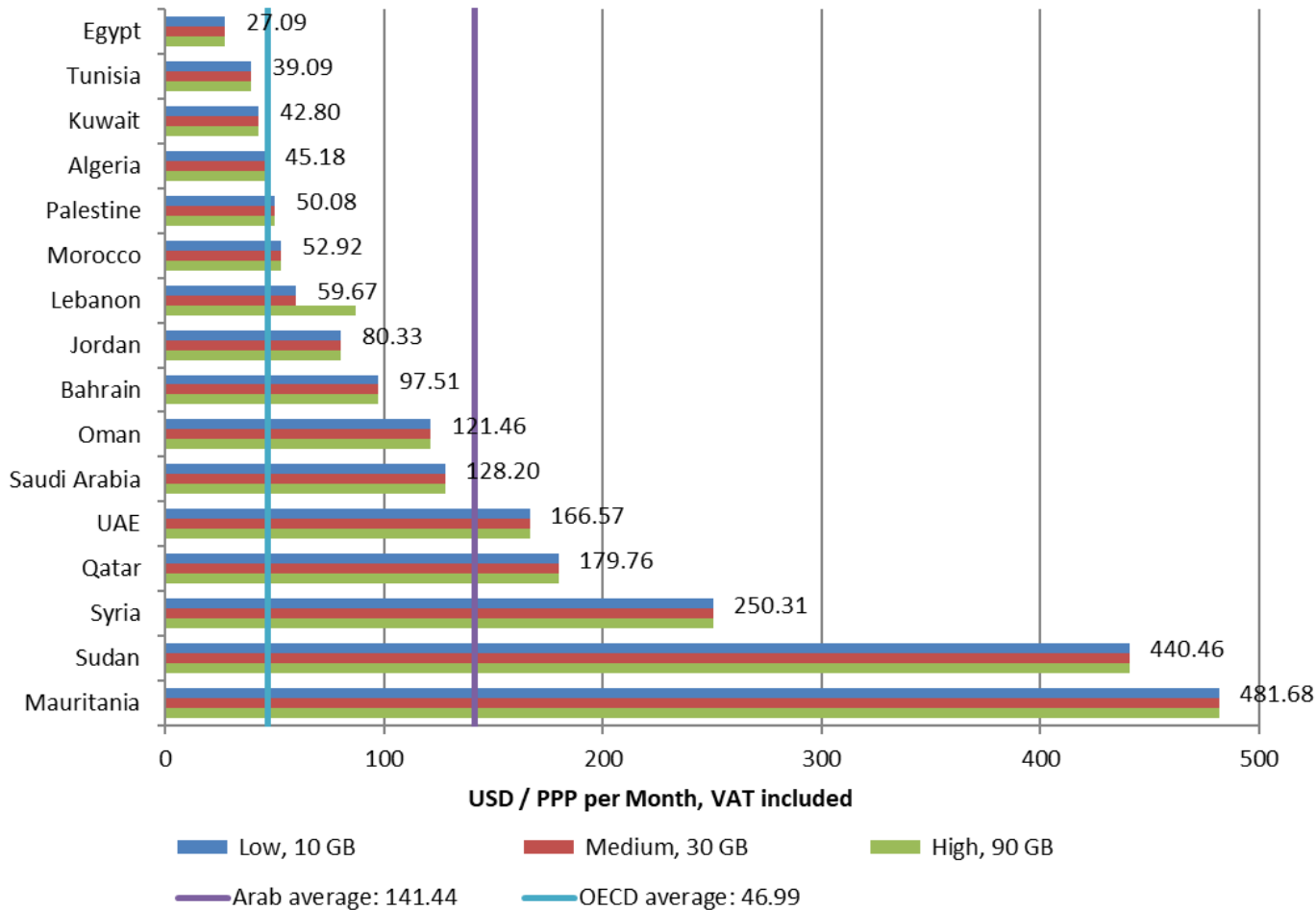


RESIDENTIAL FIXED BROADBAND LOW SPEED OECD 2017 BASKET ≥ 10 MB/S



AREGNET Fixed Broadband Price Benchmarking 2021

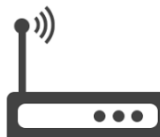
OECD 2017: Residential Fixed Broadband ≥ 10 Mb/s, low, medium and high usage



Total monthly cost calculated based on three usage baskets:

Low usage: 10 GB
 Medium usage: 30 GB
 High usage: 90 GB.

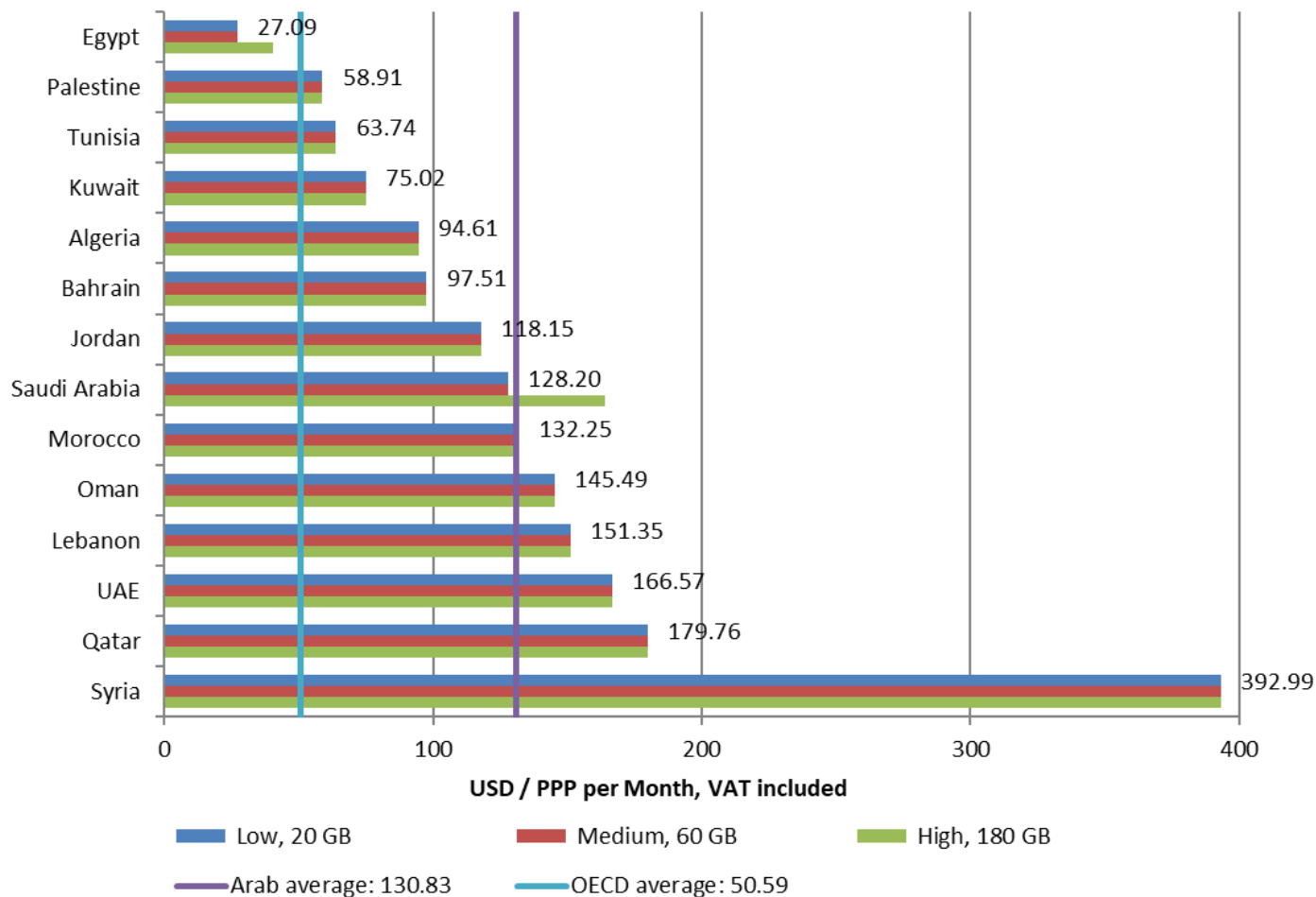
Average lines are based on the medium usage basket.



RESIDENTIAL FIXED BROADBAND MEDIUM SPEED OECD 2017 BASKET \geq 25 MB/S



AREGNET Fixed Broadband Price Benchmarking 2021
OECD 2017: Residential Fixed Broadband \geq 25 Mb/s, low, medium and high usage



Total monthly cost calculated based on three usage baskets:

Low usage: 20 GB
 Medium usage: 60 GB
 High usage: 180 GB.

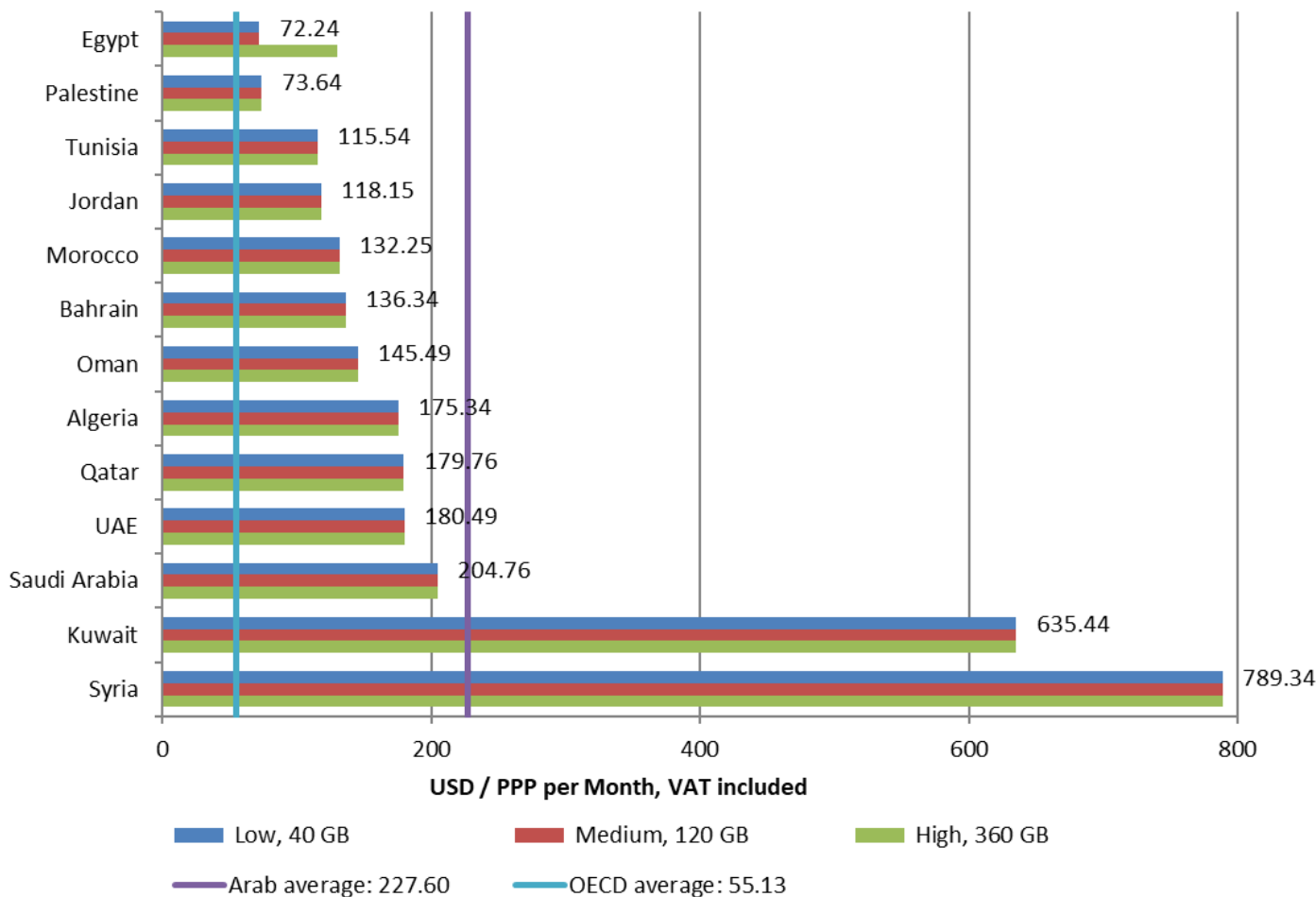
Average lines are based on the medium usage basket.



RESIDENTIAL FIXED BROADBAND HIGH SPEED OECD 2017 BASKET \geq 100 MB/S



AREGNET Fixed Broadband Price Benchmarking 2021
OECD 2017: Residential Fixed Broadband \geq 100 Mb/s, low, medium and high usage



Total monthly cost calculated based on three usage baskets:

Low usage: 40 GB
 Medium usage: 120 GB
 High usage: 360 GB.

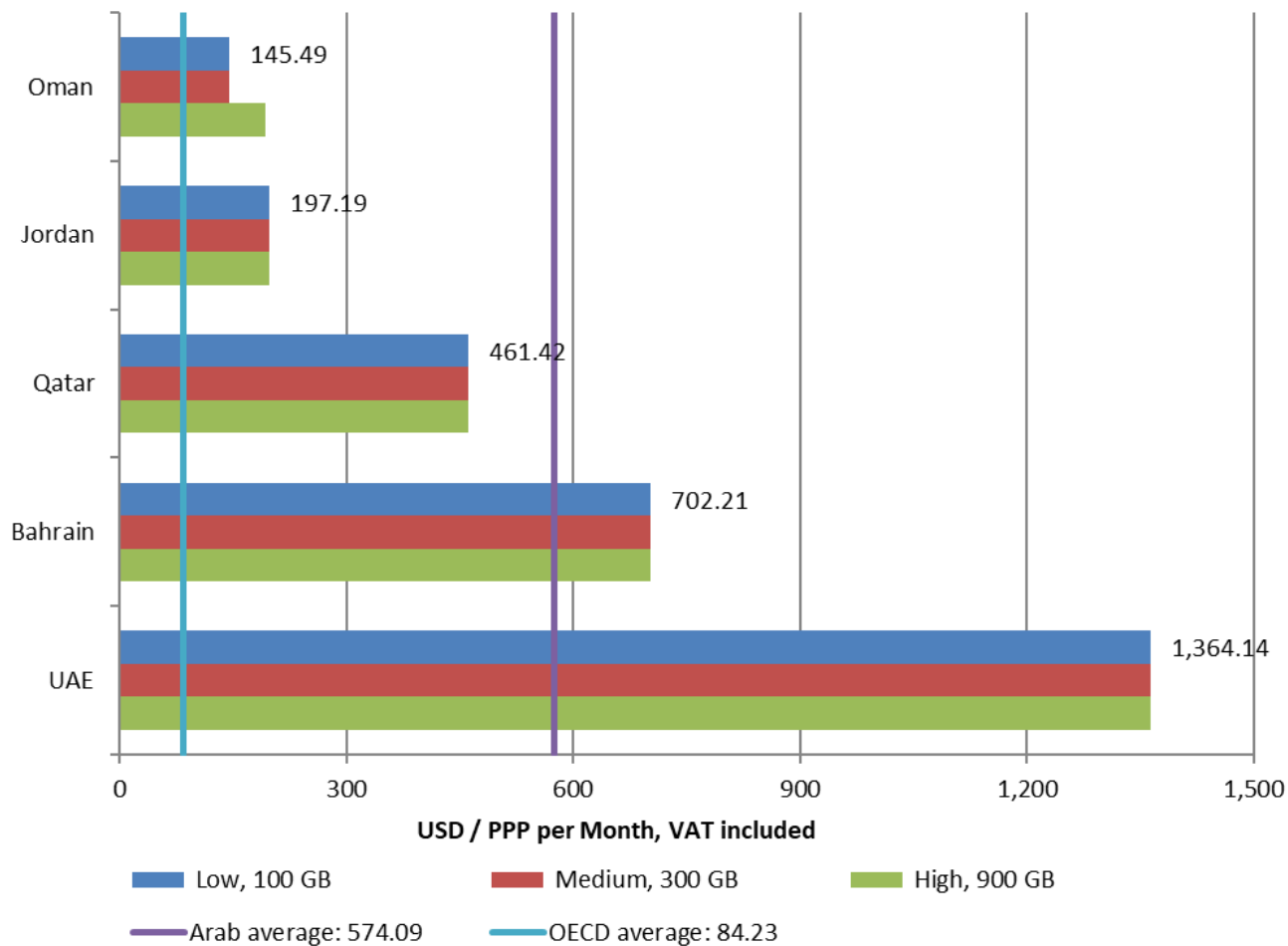
Average lines are based on the medium usage basket.



RESIDENTIAL FIXED BROADBAND VERY HIGH SPEED OECD 2017 BASKET \geq 1000 MB/S



AREGNET Fixed Broadband Price Benchmarking 2021
OECD 2017: Residential Fixed Broadband \geq 1000 Mb/s, low, medium and high usage



Total monthly cost calculated based on three usage baskets:

Low usage: 100 GB
 Medium usage: 300 GB
 High usage: 900 GB.

Average lines are based on the medium usage basket.

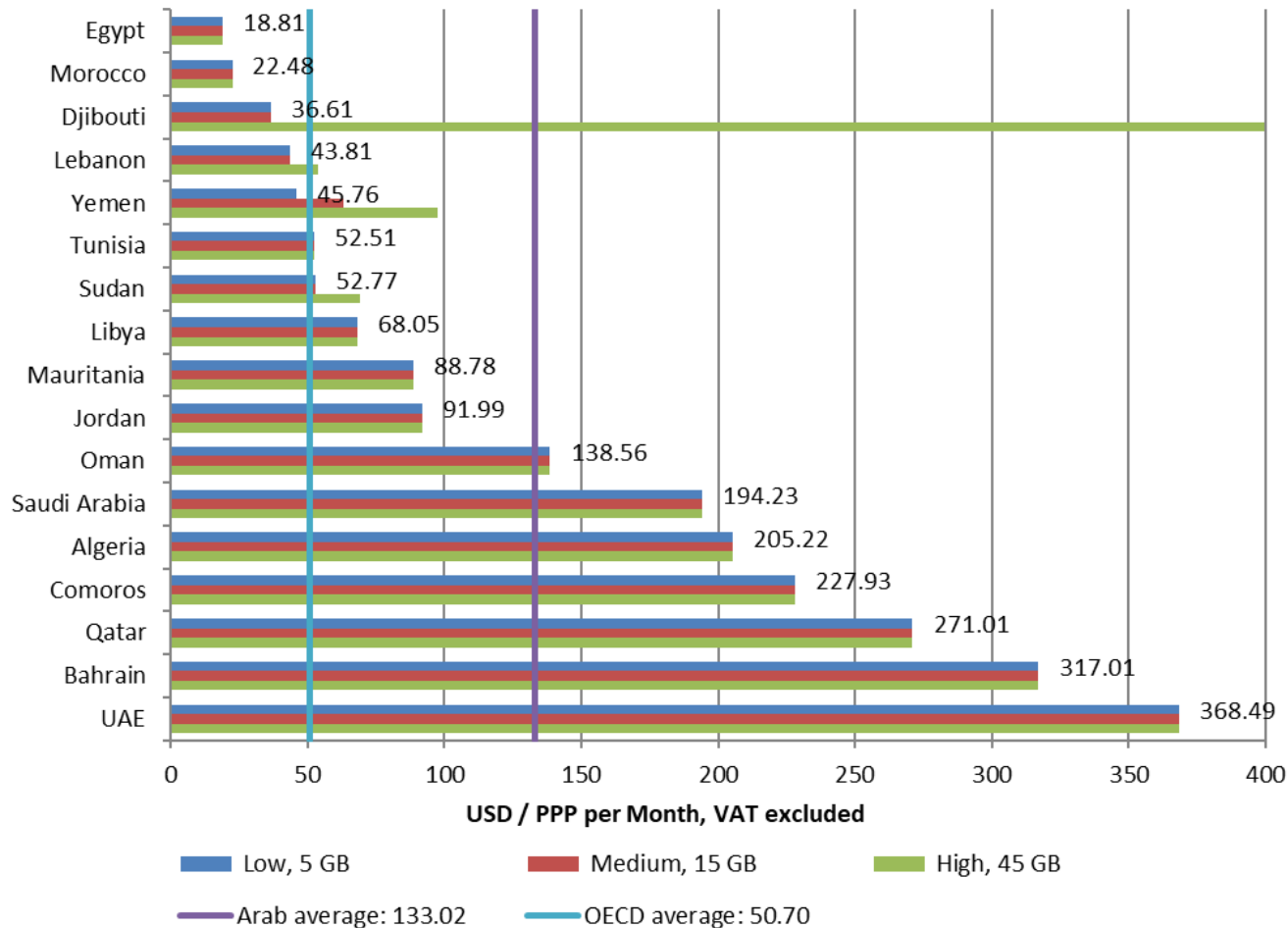


BUSINESS FIXED BROADBAND VERY LOW SPEED OECD 2017 BASKET ≥ 0.25 MB/S



AREGNET Fixed Broadband Price Benchmarking 2021

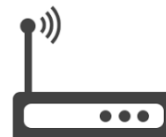
OECD 2017: Business Fixed Broadband ≥ 0.25 Mb/s, low, medium and high usage



Total monthly cost calculated based on three usage baskets:

Low usage: 5 GB
 Medium usage: 15 GB
 High usage: 45 GB.

Average lines are based on the medium usage basket.

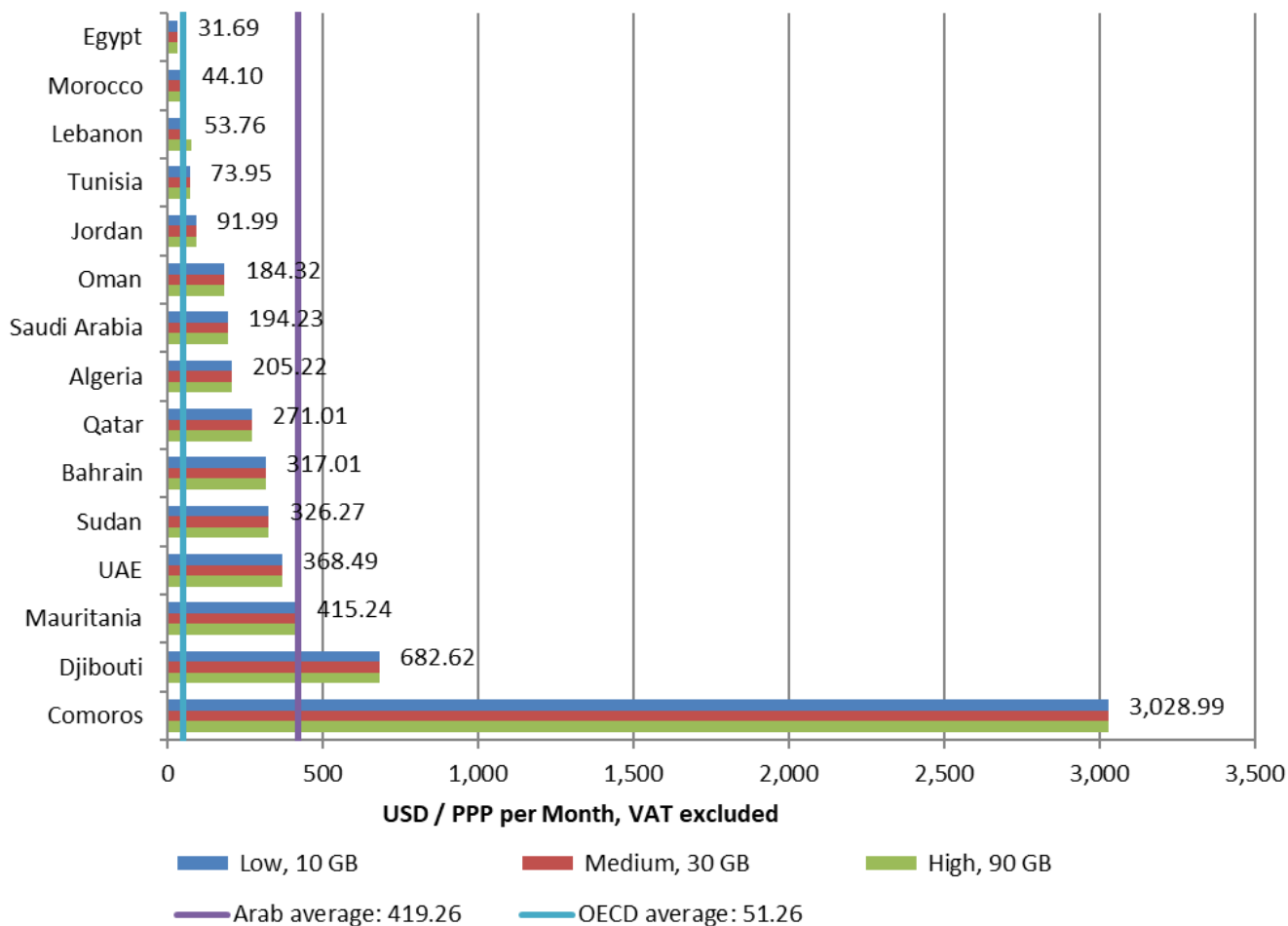


BUSINESS FIXED BROADBAND LOW SPEED OECD 2017 BASKET ≥ 10 MB/S



AREGNET Fixed Broadband Price Benchmarking 2021

OECD 2017: Business Fixed Broadband ≥ 10 Mb/s, low, medium and high usage



Total monthly cost calculated based on three usage baskets:

Low usage: 10 GB
Medium usage: 30 GB
High usage: 90 GB.

Average lines are based on the medium usage basket.

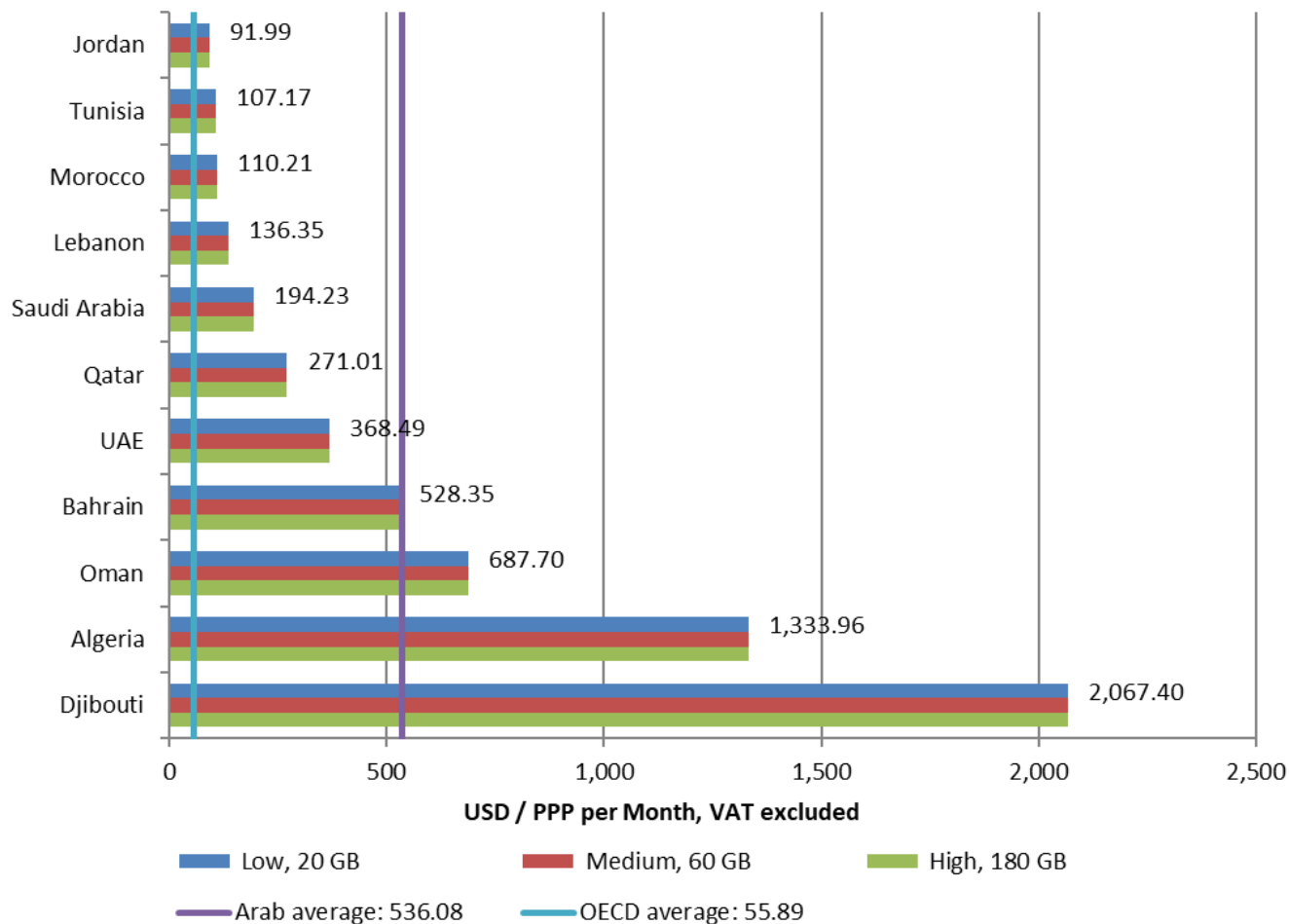


BUSINESS FIXED BROADBAND MEDIUM SPEED OECD 2017 BASKET \geq 25 MB/S



AREGNET Fixed Broadband Price Benchmarking 2021

OECD 2017: Business Fixed Broadband \geq 25 Mb/s, low, medium and high usage



Total monthly cost calculated based on three usage baskets:

Low usage: 20 GB
 Medium usage: 60 GB
 High usage: 180 GB.

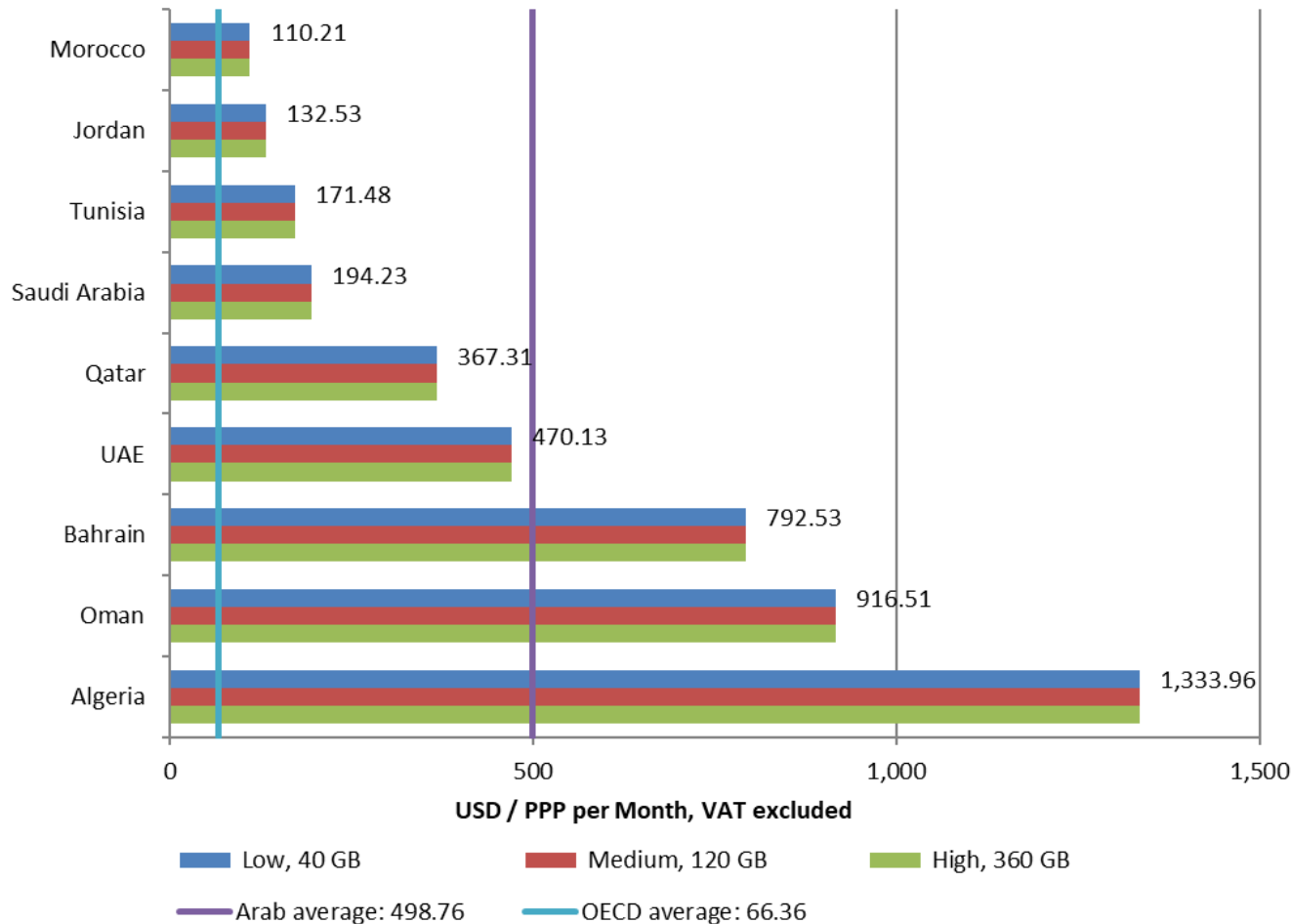
Average lines are based on the medium usage basket.



BUSINESS FIXED BROADBAND HIGH SPEED OECD 2017 BASKET \geq 100 MB/S



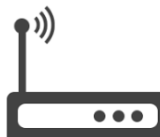
AREGNET Fixed Broadband Price Benchmarking 2021
OECD 2017: Business Fixed Broadband \geq 100 Mb/s, low, medium and high usage



Total monthly cost calculated based on three usage baskets:

Low usage: 40 GB
 Medium usage: 120 GB
 High usage: 360 GB.

Average lines are based on the medium usage basket.



OBSERVATIONS FROM FIXED BROADBAND BASKET RESULTS



- The tables below shows the 3 cheapest and 3 most expensive countries for each of the baskets considered for medium usage – residential and business, as well as both the OECD and Arab average for each basket (low and high usage may differ, but typically don't).

Residential-medium usage	Cheapest			Most expensive			USD PPP/month inc VAT	
	1st	2nd	3rd	1st	2nd	3rd	OECD average	Arab average
>= 0.25 Mb/s / 15 GB	Syria	Libya	Iraq	Saudi Arabia	Qatar	Djibouti	46	61
>= 10 Mb/s / 30 GB	Egypt	Tunisia	Kuwait	Mauritania	Sudan	Syria	47	141
>= 25 Mb/s / 60 GB	Egypt	Palestine	Tunisia	Syria	Qatar	UAE	51	131
>= 100 Mb/s / 120 GB	Egypt	Palestine	Tunisia	Syria	Kuwait	Saudi Arabia	55	228
>= 1000 Mb/s / 300 GB	Oman	Jordan	Qatar	UAE	Bahrain		84	574
Business-medium usage	Cheapest			Most expensive			USD PPP/month excl VAT	
	1st	2nd	3rd	1st	2nd	3rd	OECD average	Arab average
>= 0.25 Mb/s / 15 GB	Egypt	Morocco	Djibouti	UAE	Bahrain	Qatar	51	133
>= 10 Mb/s / 30 GB	Egypt	Morocco	Lebanon	Comoros	Djibouti	Mauritania	51	419
>= 25 Mb/s / 60 GB	Jordan	Tunisia	Morocco	Djibouti	Algeria	Oman	56	536
>= 100 Mb/s / 120 GB	Morocco	Jordan	Tunisia	Algeria	Oman	Bahrain	66	499
>= 1000 Mb/s / 300 GB								

- Egypt continues to feature prominently in the 'Cheapest' three for both residential and business users for many of the baskets. Palestine, Tunisia and Syria, also feature in the top three for selected residential baskets. For business users Egypt, Morocco and Tunisia feature quite regularly in the top three. Most expensive countries for residential users are Qatar, Syria and UAA. For business users, the most expensive countries varies a lot depending on minimum speed of the basket and data allowance, although Algeria, Bahrain and Djibouti feature more than once.
- The average Arab residential cost is still considerably higher than the OECD average or up to 6.8 times higher for the highest speed basket. For business services, the average is up to 9.6 times higher.
 - The residential figure continues to be skewed by particularly high costs in a number of countries, in particular, Mauritania, Sudan and Syria. For business services, the Arab average is heavily skewed by a number of countries, including Algeria, Comoros and Djibouti.
- In eleven of the twenty one countries usage based tariffs are still prevalent, in some instances providers offer both usage based and flat rate tariffs. Usage-based pricing affects residential results for Egypt, Iraq, Lebanon, Libya, Oman, Saudi Arabia, Sudan and Yemen, while for business pricing, usage impacts results in Djibouti, Lebanon and Yemen. Usage based tariffs continue to be offered in many OECD countries, however, often it's limited to one provider with an country, and often for low usage tariffs.





FIXED BROADBAND TIME SERIES ANALYSIS AND RANKING TABLES 2017-2021

2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 0.25 MB/S LOW USAGE



Results for Fixed Broadband: OECD Low 5 GB / ≥ 0.25 Mb/s basket, 2017-2021

Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria	39.07	39.07	39.07	39.07	45.18
Bahrain	53.57	52.84	55.48	55.48	97.51
Comoros	83.07	83.07	83.07	83.07	83.07
Djibouti	82.67	82.93	82.93	90.94	120.25
Egypt	11.29	11.29	24.83	27.09	27.09
Iraq			23.94	23.94	23.94
Jordan	67.80	67.80	69.08	69.08	80.33
Kuwait		15.00	15.00	13.68	42.80
Lebanon	47.68	48.63	48.63	48.63	48.63
Libya	20.22	20.22	15.47	15.47	15.47
Mauritania	87.38	102.98	102.98	102.98	102.98
Morocco	26.40	26.40	27.48	27.12	26.98
Oman	73.41	73.41	73.41	73.41	73.41
Palestine	42.71	42.71	42.71	32.40	32.40
Qatar	139.63	132.66	123.03	114.85	123.03
Saudi Arabia	54.71	57.44	62.91	142.44	128.20
Somalia					
Sudan					71.24
Syria	3.84	3.84	5.15	8.31	8.31
Tunisia	26.26	28.51	21.97	21.97	25.90
UAE	71.83	34.58	34.58	34.58	34.58
Yemen	22.42	15.21	15.21	15.21	15.21

Arab average	53.00	49.40	48.35	51.99	58.41
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	7	9	10	11	11
Bahrain	10	12	13	13	17
Comoros	16	17	18	16	16
Djibouti	15	16	17	17	19
Egypt	2	2	7	7	7
Iraq			6	6	4
Jordan	12	14	15	14	15
Kuwait		3	2	2	10
Lebanon	9	11	12	12	12
Libya	3	5	4	4	3
Mauritania	17	18	19	18	18
Morocco	6	6	8	8	6
Oman	14	15	16	15	14
Palestine	8	10	11	9	8
Qatar	18	19	20	19	20
Saudi Arabia	11	13	14	20	21
Somalia					
Sudan					13
Syria	1	1	1	1	1
Tunisia	5	7	5	5	5
UAE	13	8	9	10	9
Yemen	4	4	3	3	2

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 0.25 MB/S MEDIUM USAGE



Results for Fixed Broadband: OECD Medium 15 GB / ≥ 0.25 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria	39.07	39.07	39.07	39.07	45.18
Bahrain	53.57	52.84	55.48	55.48	97.51
Comoros	83.07	83.07	83.07	83.07	83.07
Djibouti	82.67	82.93	82.93	90.94	120.25
Egypt	21.45	21.45	24.83	27.09	27.09
Iraq			23.94	23.94	23.94
Jordan	67.80	67.80	69.08	69.08	80.33
Kuwait		15.00	15.00	13.68	42.80
Lebanon	47.68	48.63	48.63	48.63	48.63
Libya	20.22	20.22	15.47	15.47	15.47
Mauritania	87.38	102.98	102.98	102.98	102.98
Morocco	26.40	26.40	27.48	27.12	26.98
Oman	73.41	73.41	73.41	73.41	73.41
Palestine	42.71	42.71	42.71	32.40	32.40
Qatar	139.63	132.66	123.03	114.85	123.03
Saudi Arabia	54.71	57.44	62.91	142.44	128.20
Somalia					
Sudan					71.24
Syria	5.43	5.43	6.42	8.31	8.31
Tunisia	26.26	28.51	21.97	21.97	25.90
UAE	71.83	34.58	34.58	34.58	34.58
Yemen	65.66	65.66	65.66	65.66	65.66

Arab average	56.05	52.67	50.93	54.51	60.81
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	6	8	9	10	10
Bahrain	9	11	12	12	17
Comoros	16	17	18	16	16
Djibouti	15	16	17	17	19
Egypt	3	4	6	6	6
Iraq			5	5	3
Jordan	12	14	15	14	15
Kuwait		2	2	2	9
Lebanon	8	10	11	11	11
Libya	2	3	3	3	2
Mauritania	17	18	19	18	18
Morocco	5	5	7	7	5
Oman	14	15	16	15	14
Palestine	7	9	10	8	7
Qatar	18	19	20	19	20
Saudi Arabia	10	12	13	20	21
Somalia					
Sudan					13
Syria	1	1	1	1	1
Tunisia	4	6	4	4	4
UAE	13	7	8	9	8
Yemen	11	13	14	13	12

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 0.25 MB/S HIGH USAGE



Results for Fixed Broadband: OECD High 45 GB / ≥ 0.25 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria	39.07	39.07	39.07	39.07	45.18
Bahrain	53.57	52.84	55.48	55.48	97.51
Comoros	83.07	83.07	83.07	83.07	83.07
Djibouti	82.67	82.93	82.93	90.94	120.25
Egypt	21.45	21.45	24.83	27.09	27.09
Iraq			39.91	39.91	39.91
Jordan	67.80	67.80	69.08	69.08	80.33
Kuwait		15.00	15.00	13.68	42.80
Lebanon	58.63	59.67	59.67	48.63	59.67
Libya	99.35	99.35	32.09	32.09	28.13
Mauritania	87.38	102.98	102.98	102.98	102.98
Morocco	26.40	26.40	27.48	27.12	26.98
Oman	97.44	97.44	97.44	97.44	97.44
Palestine	42.71	42.71	42.71	32.40	32.40
Qatar	139.63	132.66	123.03	114.85	123.03
Saudi Arabia	123.86	130.05	142.44	142.44	128.20
Somalia					
Sudan					93.21
Syria	5.43	5.43	6.42	8.31	8.31
Tunisia	26.26	28.51	21.97	21.97	25.90
UAE	71.83	34.58	34.58	34.58	34.58
Yemen	102.23				

Arab average	68.26	62.33	57.91	56.90	64.85
--------------	-------	-------	-------	-------	-------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	5	7	8	9	10
Bahrain	7	9	11	12	16
Comoros	12	13	15	14	13
Djibouti	11	12	14	15	18
Egypt	2	3	4	4	4
Iraq			9	10	8
Jordan	9	11	13	13	12
Kuwait		2	2	2	9
Lebanon	8	10	12	11	11
Libya	15	15	6	6	5
Mauritania	13	16	17	17	17
Morocco	4	4	5	5	3
Oman	14	14	16	16	15
Palestine	6	8	10	7	6
Qatar	18	18	18	18	19
Saudi Arabia	17	17	19	19	20
Somalia					
Sudan					14
Syria	1	1	1	1	1
Tunisia	3	5	3	3	2
UAE	10	6	7	8	7
Yemen	16	-	-	-	-

Least expensive
 Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 10 MB/S LOW USAGE



Results for Fixed Broadband: OECD Low 10 GB / ≥ 10 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria	192.93	192.93	192.93	122.08	45.18
Bahrain	53.57	52.84	55.48	55.48	97.51
Comoros					
Djibouti					
Egypt	36.12	36.12	33.86	27.09	27.09
Iraq					
Jordan	84.83	84.83	86.12	69.08	80.33
Kuwait		58.25	58.25	52.51	42.80
Lebanon	58.63	59.67	59.67	59.67	59.67
Libya					
Mauritania	391.33	481.68	481.68	481.68	481.68
Morocco	52.35	52.35	53.43	53.07	52.92
Oman	135.88	135.88	97.44	97.44	121.46
Palestine	55.23	55.23	55.23	55.23	50.08
Qatar	139.63	154.08	159.69	174.14	179.76
Saudi Arabia	123.86	130.05	142.44	142.44	128.20
Somalia					
Sudan					440.46
Syria	54.25	54.25	59.05	250.31	250.31
Tunisia	41.80	44.26	31.08	31.08	39.09
UAE	138.12	141.30	141.30	166.57	166.57
Yemen					

Arab average	111.32	115.58	113.84	122.52	141.44
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	13	14	14	10	4
Bahrain	4	4	5	6	9
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	1	1	2	1	1
Iraq			-	-	-
Jordan	8	9	9	8	8
Kuwait		7	6	3	3
Lebanon	7	8	8	7	7
Libya	-	-	-	-	-
Mauritania	14	15	15	15	16
Morocco	3	3	3	4	6
Oman	10	11	10	9	10
Palestine	6	6	4	5	5
Qatar	12	13	13	13	13
Saudi Arabia	9	10	12	11	11
Somalia					
Sudan					15
Syria	5	5	7	14	14
Tunisia	2	2	1	2	2
UAE	11	12	11	12	12
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 10 MB/S MEDIUM USAGE



Results for Fixed Broadband: OECD Medium 30 GB / ≥ 10 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria	192.93	192.93	192.93	122.08	45.18
Bahrain	53.57	52.84	55.48	55.48	97.51
Comoros					
Djibouti					
Egypt	36.12	36.12	33.86	27.09	27.09
Iraq					
Jordan	84.83	84.83	86.12	69.08	80.33
Kuwait		58.25	58.25	52.51	42.80
Lebanon	58.63	59.67	59.67	59.67	59.67
Libya					
Mauritania	391.33	481.68	481.68	481.68	481.68
Morocco	52.35	52.35	53.43	53.07	52.92
Oman	135.88	135.88	97.44	97.44	121.46
Palestine	55.23	55.23	55.23	55.23	50.08
Qatar	139.63	154.08	159.69	174.14	179.76
Saudi Arabia	123.86	130.05	142.44	142.44	128.20
Somalia					
Sudan					440.46
Syria	54.25	54.25	59.05	250.31	250.31
Tunisia	41.80	44.26	31.08	31.08	39.09
UAE	138.12	141.30	141.30	166.57	166.57
Yemen					

Arab average	111.32	115.58	113.84	122.52	141.44
--------------	--------	--------	--------	--------	--------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	13	14	14	10	4
Bahrain	4	4	5	6	9
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	1	1	2	1	1
Iraq			-	-	-
Jordan	8	9	9	8	8
Kuwait		7	6	3	3
Lebanon	7	8	8	7	7
Libya	-	-	-	-	-
Mauritania	14	15	15	15	16
Morocco	3	3	3	4	6
Oman	10	11	10	9	10
Palestine	6	6	4	5	5
Qatar	12	13	13	13	13
Saudi Arabia	9	10	12	11	11
Somalia					
Sudan					15
Syria	5	5	7	14	14
Tunisia	2	2	1	2	2
UAE	11	12	11	12	12
Yemen	-	-	-	-	-

Least expensive
 Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 10 MB/S HIGH USAGE



Results for Fixed Broadband: OECD High 90 GB / ≥ 10 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria	192.93	192.93	192.93	122.08	45.18
Bahrain	64.14	52.84	55.48	55.48	97.51
Comoros					
Djibouti					
Egypt	36.12	36.12	33.86	27.09	27.09
Iraq					
Jordan	84.83	84.83	86.12	69.08	80.33
Kuwait		58.25	58.25	52.51	42.80
Lebanon	85.99	87.28	87.28	59.67	87.28
Libya					
Mauritania	391.33	481.68	481.68	481.68	481.68
Morocco	52.35	52.35	53.43	53.07	52.92
Oman	135.88	135.88	97.44	97.44	121.46
Palestine	55.23	55.23	55.23	55.23	50.08
Qatar	139.63	154.08	159.69	174.14	179.76
Saudi Arabia	123.86	130.05	142.44	142.44	128.20
Somalia					
Sudan					440.46
Syria	54.25	54.25	59.05	250.31	250.31
Tunisia	41.80	44.26	31.08	31.08	39.09
UAE	138.12	141.30	141.30	166.57	166.57
Yemen					

Arab average	114.03	117.42	115.68	122.52	143.17
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	13	14	14	10	4
Bahrain	6	4	5	6	9
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	1	1	2	1	1
Iraq			-	-	-
Jordan	7	8	8	8	7
Kuwait		7	6	3	3
Lebanon	8	9	9	7	8
Libya	-	-	-	-	-
Mauritania	14	15	15	15	16
Morocco	3	3	3	4	6
Oman	10	11	10	9	10
Palestine	5	6	4	5	5
Qatar	12	13	13	13	13
Saudi Arabia	9	10	12	11	11
Somalia					
Sudan					15
Syria	4	5	7	14	14
Tunisia	2	2	1	2	2
UAE	11	12	11	12	12
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 25 MB/S LOW USAGE



Results for Fixed Broadband: OECD Low 20 GB / ≥ 25 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria			360.22	248.94	94.61
Bahrain	159.24	106.40	166.43	119.70	97.51
Comoros					
Djibouti					
Egypt			36.12	27.09	27.09
Iraq					
Jordan	94.14	94.14	108.97	108.97	118.15
Kuwait		135.91	135.91	108.55	75.02
Lebanon		151.35	151.35	151.35	151.35
Libya					
Mauritania					
Morocco	130.45	130.45	132.24	132.25	132.25
Oman	169.51	169.51	169.51	145.49	145.49
Palestine	67.75	67.75	67.75	75.85	58.91
Qatar	187.78	202.22	159.69	174.14	179.76
Saudi Arabia	154.83	130.05	142.44	142.44	128.20
Somalia					
Sudan					
Syria				392.99	392.99
Tunisia	102.30	102.41	75.51	76.60	63.74
UAE	226.50	151.04	151.04	166.57	166.57
Yemen					

Arab average	143.61	131.02	142.86	147.92	130.83
--------------	--------	--------	--------	--------	--------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	13	13	5
Bahrain	6	4	11	6	6
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	1	1	1
Iraq	-	-	-	-	-
Jordan	2	2	4	5	7
Kuwait	-	7	6	4	4
Lebanon	-	9	9	10	11
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	4	6	5	7	9
Oman	7	10	12	9	10
Palestine	1	1	2	2	2
Qatar	8	11	10	12	13
Saudi Arabia	5	5	7	8	8
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	14	14
Tunisia	3	3	3	3	3
UAE	9	8	8	11	12
Yemen	-	-	-	-	-

Least expensive
 Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 25 MB/S MEDIUM USAGE



Results for Fixed Broadband: OECD Medium 60 GB / ≥ 25 Mb/s basket, 2017-2021

Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria			360.22	248.94	94.61
Bahrain	159.24	106.40	166.43	119.70	97.51
Comoros					
Djibouti					
Egypt			45.15	27.09	27.09
Iraq					
Jordan	94.14	94.14	108.97	108.97	118.15
Kuwait		135.91	135.91	108.55	75.02
Lebanon		151.35	151.35	151.35	151.35
Libya					
Mauritania					
Morocco	130.45	130.45	132.24	132.25	132.25
Oman	169.51	169.51	169.51	145.49	145.49
Palestine	67.75	67.75	67.75	75.85	58.91
Qatar	187.78	202.22	159.69	174.14	179.76
Saudi Arabia	154.83	130.05	142.44	142.44	128.20
Somalia					
Sudan					
Syria				392.99	392.99
Tunisia	102.30	102.41	75.51	76.60	63.74
UAE	226.50	151.04	151.04	166.57	166.57
Yemen					

Arab average	143.61	131.02	143.56	147.92	130.83
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	13	13	5
Bahrain	6	4	11	6	6
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	1	1	1
Iraq	-	-	-	-	-
Jordan	2	2	4	5	7
Kuwait	-	7	6	4	4
Lebanon	-	9	9	10	11
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	4	6	5	7	9
Oman	7	10	12	9	10
Palestine	1	1	2	2	2
Qatar	8	11	10	12	13
Saudi Arabia	5	5	7	8	8
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	14	14
Tunisia	3	3	3	3	3
UAE	9	8	8	11	12
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 25 MB/S HIGH USAGE



Results for Fixed Broadband: OECD High 180 GB / ≥ 25 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria			360.22	248.94	94.61
Bahrain	159.24	132.82	166.43	119.70	97.51
Comoros					
Djibouti					
Egypt			67.73	40.64	40.64
Iraq					
Jordan	94.14	94.14	108.97	108.97	118.15
Kuwait		135.91	135.91	108.55	75.02
Lebanon		151.35	151.35	151.35	151.35
Libya					
Mauritania					
Morocco	130.45	130.45	132.24	132.25	132.25
Oman	169.51	169.51	169.51	145.49	145.49
Palestine	67.75	67.75	67.75	75.85	58.91
Qatar	187.78	202.22	159.69	174.14	179.76
Saudi Arabia	154.83	130.05	142.44	142.44	163.81
Somalia					
Sudan					
Syria				392.99	392.99
Tunisia	102.30	102.41	75.51	76.60	63.74
UAE	226.50	151.04	151.04	166.57	166.57
Yemen					

Arab average	143.61	133.42	145.29	148.89	134.34
--------------	--------	--------	--------	--------	--------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	13	13	5
Bahrain	6	6	11	6	6
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	1	1	1
Iraq	-	-	-	-	-
Jordan	2	2	4	5	7
Kuwait	-	7	6	4	4
Lebanon	-	9	9	10	10
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	4	5	5	7	8
Oman	7	10	12	9	9
Palestine	1	1	2	2	2
Qatar	8	11	10	12	13
Saudi Arabia	5	4	7	8	11
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	14	14
Tunisia	3	3	3	3	3
UAE	9	8	8	11	12
Yemen	-	-	-	-	-

Least expensive
 Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL >=100 MB/S LOW USAGE



Results for Fixed Broadband: OECD Low 40 GB / >=100 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria			604.44	248.94	175.34
Bahrain	397.00	369.85	416.08	230.65	136.34
Comoros					
Djibouti					
Egypt			67.73	72.24	72.24
Iraq					
Jordan	133.09	133.09	132.16	108.97	118.15
Kuwait				165.92	635.44
Lebanon					
Libya					
Mauritania					
Morocco	130.45	130.45	132.24	132.25	132.25
Oman	385.74	385.74	385.74	169.51	145.49
Palestine	114.14	114.14	114.14	94.26	73.64
Qatar	260.00	274.45	207.84	207.84	179.76
Saudi Arabia	247.72	260.11	219.48	178.05	204.76
Somalia					
Sudan					
Syria				789.34	789.34
Tunisia	225.55	225.66	129.10	130.19	115.54
UAE	447.45	466.10	183.06	180.49	180.49
Yemen					

Arab average	260.13	262.17	235.64	208.36	227.60
--------------	--------	--------	--------	--------	--------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	11	12	8
Bahrain	8	7	10	11	6
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	1	1	1
Iraq	-	-	-	-	-
Jordan	3	3	4	3	4
Kuwait	-	-	-	6	12
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	2	2	5	5	5
Oman	7	8	9	7	7
Palestine	1	1	2	2	2
Qatar	6	6	7	10	9
Saudi Arabia	5	5	8	8	11
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	13	13
Tunisia	4	4	3	4	3
UAE	9	9	6	9	10
Yemen	-	-	-	-	-

Least expensive
 Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 100 MB/S MEDIUM USAGE



Results for Fixed Broadband: OECD Medium 120 GB / ≥ 100 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria			604.44	248.94	175.34
Bahrain	397.00	369.85	416.08	230.65	136.34
Comoros					
Djibouti					
Egypt			90.31	72.24	72.24
Iraq					
Jordan	133.09	133.09	132.16	108.97	118.15
Kuwait				165.92	635.44
Lebanon					
Libya					
Mauritania					
Morocco	130.45	130.45	132.24	132.25	132.25
Oman	385.74	385.74	385.74	169.51	145.49
Palestine	114.14	114.14	114.14	94.26	73.64
Qatar	260.00	274.45	207.84	207.84	179.76
Saudi Arabia	247.72	260.11	219.48	178.05	204.76
Somalia					
Sudan					
Syria				789.34	789.34
Tunisia	225.55	225.66	129.10	130.19	115.54
UAE	447.45	466.10	183.06	180.49	180.49
Yemen					

Arab average	260.13	262.17	237.69	208.36	227.60
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	11	12	8
Bahrain	8	7	10	11	6
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	1	1	1
Iraq	-	-	-	-	-
Jordan	3	3	4	3	4
Kuwait	-	-	-	6	12
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	2	2	5	5	5
Oman	7	8	9	7	7
Palestine	1	1	2	2	2
Qatar	6	6	7	10	9
Saudi Arabia	5	5	8	8	11
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	13	13
Tunisia	4	4	3	4	3
UAE	9	9	6	9	10
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL >=100 MB/S HIGH USAGE



Results for Fixed Broadband: OECD High 360 GB / >=100 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria			604.44	248.94	175.34
Bahrain	397.00	369.85	416.08	230.65	136.34
Comoros					
Djibouti					
Egypt			158.04	129.81	129.81
Iraq					
Jordan	133.09	133.09	132.16	108.97	118.15
Kuwait				165.92	635.44
Lebanon					
Libya					
Mauritania					
Morocco	130.45	130.45	132.24	132.25	132.25
Oman	385.74	385.74	385.74	169.51	145.49
Palestine	114.14	114.14	114.14	94.26	73.64
Qatar	260.00	274.45	207.84	207.84	179.76
Saudi Arabia	247.72	260.11	219.48	178.05	204.76
Somalia					
Sudan					
Syria				789.34	789.34
Tunisia	225.55	225.66	129.10	130.19	115.54
UAE	447.45	466.10	183.06	180.49	180.49
Yemen					

Arab average	260.13	262.17	243.85	212.79	232.03
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	11	12	8
Bahrain	8	7	10	11	6
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	5	3	4
Iraq	-	-	-	-	-
Jordan	3	3	3	2	3
Kuwait	-	-	-	6	12
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	2	2	4	5	5
Oman	7	8	9	7	7
Palestine	1	1	1	1	1
Qatar	6	6	7	10	9
Saudi Arabia	5	5	8	8	11
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	13	13
Tunisia	4	4	2	4	2
UAE	9	9	6	9	10
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 1000 MB/S LOW USAGE



Results for Fixed Broadband: OECD Low 100 GB / ≥ 1000 Mb/s basket, 2017-2021

Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria					
Bahrain					702.21
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan			218.29	231.52	197.19
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco					
Oman				481.84	145.49
Palestine					
Qatar	934.08	731.86	737.48	737.48	461.42
Saudi Arabia					
Somalia					
Sudan					
Syria					
Tunisia					
UAE	2,215.49	2,322.54	1,324.95	1,322.38	1,364.14
Yemen					

Arab average	1574.79	1527.20	760.24	693.31	574.09
--------------	---------	---------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	-	-	-
Bahrain	-	-	-	-	4
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	1	1	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	-	-
Oman	-	-	-	2	1
Palestine	-	-	-	-	-
Qatar	1	1	2	3	3
Saudi Arabia	-	-	-	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	2	2	3	4	5
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 1000 MB/S MEDIUM USAGE



Results for Fixed Broadband: OECD Medium 300 GB / ≥ 1000 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria					
Bahrain					702.21
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan			218.29	231.52	197.19
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco					
Oman				481.84	145.49
Palestine					
Qatar	934.08	731.86	737.48	737.48	461.42
Saudi Arabia					
Somalia					
Sudan					
Syria					
Tunisia					
UAE	2,215.49	2,322.54	1,324.95	1,322.38	1,364.14
Yemen					

Arab average	1574.79	1527.20	760.24	693.31	574.09
--------------	---------	---------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	-	-	-
Bahrain	-	-	-	-	4
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	1	1	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	-	-
Oman	-	-	-	2	1
Palestine	-	-	-	-	-
Qatar	1	1	2	3	3
Saudi Arabia	-	-	-	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	2	2	3	4	5
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING RESIDENTIAL ≥ 1000 MB/S HIGH USAGE



Results for Fixed Broadband: OECD High 900 GB / ≥ 1000 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT included, Residential results

	2017	2018	2019	2020	2021
Algeria					
Bahrain					702.21
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan			218.29	231.52	197.19
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco					
Oman				481.84	193.54
Palestine					
Qatar	934.08	731.86	737.48	737.48	461.42
Saudi Arabia					
Somalia					
Sudan					
Syria					
Tunisia					
UAE	2,215.49	2,322.54	1,324.95	1,322.38	1,364.14
Yemen					

Arab average	1574.79	1527.20	760.24	693.31	583.70
--------------	---------	---------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	-	-	-
Bahrain	-	-	-	-	4
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	1	1	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	-	-	-	-	-
Oman	-	-	-	2	1
Palestine	-	-	-	-	-
Qatar	1	1	2	3	3
Saudi Arabia	-	-	-	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	2	2	3	4	5
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS ≥ 0.25 MB/S LOW USAGE



Results for Fixed Broadband: OECD Low 5 GB / ≥ 0.25 Mb/s basket, 2017-2021

Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria	208.73	205.22	205.22	205.22	205.22
Bahrain	79.25	79.25	79.25	79.25	317.01
Comoros	227.93	227.93	227.93	227.93	227.93
Djibouti	403.04	366.40	366.40	402.78	36.61
Egypt	9.90	9.90	18.81	18.81	18.81
Iraq					
Jordan	85.82	85.82	81.76	81.76	91.99
Kuwait					
Lebanon	43.35	43.81	43.81	43.81	43.81
Libya	20.22	20.22	68.05	68.05	68.05
Mauritania	75.33	88.78	88.78	88.78	88.78
Morocco	22.00	22.00	22.90	22.60	22.48
Oman	72.45	217.56	207.20	207.20	138.56
Palestine	79.35	79.35	79.35	79.35	
Qatar	340.56	340.56	340.56	340.56	271.01
Saudi Arabia	133.56	127.20	116.14	116.14	194.23
Somalia					
Sudan					52.77
Syria					
Tunisia	84.67	84.67	75.02	75.02	52.51
UAE	159.65	348.36	348.36	368.49	368.49
Yemen	45.76	45.76	45.76	45.76	45.76

Arab average	123.03	140.75	142.08	145.38	132.00
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	14	12	12	12	13
Bahrain	8	6	7	7	16
Comoros	15	14	14	14	14
Djibouti	17	17	17	17	3
Egypt	1	1	1	1	1
Iraq			-	-	-
Jordan	11	9	9	9	10
Kuwait		-	-	-	-
Lebanon	4	4	3	3	4
Libya	2	2	5	5	8
Mauritania	7	10	10	10	9
Morocco	3	3	2	2	2
Oman	6	13	13	13	11
Palestine	9	7	8	8	-
Qatar	16	15	15	15	15
Saudi Arabia	12	11	11	11	12
Somalia					
Sudan					7
Syria	-	-	-	-	-
Tunisia	10	8	6	6	6
UAE	13	16	16	16	17
Yemen	5	5	4	4	5

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS ≥ 0.25 MB/S MEDIUM USAGE



Results for Fixed Broadband: OECD Medium 15 GB / ≥ 0.25 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria	208.73	205.22	205.22	205.22	205.22
Bahrain	79.25	79.25	79.25	79.25	317.01
Comoros	227.93	227.93	227.93	227.93	227.93
Djibouti	403.04	366.40	366.40	402.78	36.61
Egypt	18.81	18.81	18.81	18.81	18.81
Iraq					
Jordan	85.82	85.82	81.76	81.76	91.99
Kuwait					
Lebanon	43.35	43.81	43.81	43.81	43.81
Libya	20.22	20.22	68.05	68.05	68.05
Mauritania	75.33	88.78	88.78	88.78	88.78
Morocco	22.00	22.00	22.90	22.60	22.48
Oman	114.25	217.56	207.20	207.20	138.56
Palestine	79.35	79.35	79.35	79.35	
Qatar	340.56	340.56	340.56	340.56	271.01
Saudi Arabia	133.56	127.20	116.14	116.14	194.23
Somalia					
Sudan					52.77
Syria					
Tunisia	84.67	84.67	75.02	75.02	52.51
UAE	180.69	348.36	348.36	368.49	368.49
Yemen	63.04	63.04	63.04	63.04	63.04

Arab average	128.27	142.29	143.09	146.40	133.02
--------------	--------	--------	--------	--------	--------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	14	12	12	12	13
Bahrain	7	6	7	7	16
Comoros	15	14	14	14	14
Djibouti	17	17	17	17	3
Egypt	1	1	1	1	1
Iraq			-	-	-
Jordan	10	9	9	9	10
Kuwait		-	-	-	-
Lebanon	4	4	3	3	4
Libya	2	2	5	5	8
Mauritania	6	10	10	10	9
Morocco	3	3	2	2	2
Oman	11	13	13	13	11
Palestine	8	7	8	8	-
Qatar	16	15	15	15	15
Saudi Arabia	12	11	11	11	12
Somalia					
Sudan					6
Syria	-	-	-	-	-
Tunisia	9	8	6	6	5
UAE	13	16	16	16	17
Yemen	5	5	4	4	7

Least expensive
 Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS ≥ 0.25 MB/S HIGH USAGE



Results for Fixed Broadband: OECD High 45 GB / ≥ 0.25 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria	208.73	205.22	205.22	205.22	205.22
Bahrain	79.25	79.25	79.25	79.25	317.01
Comoros	227.93	227.93	227.93	227.93	227.93
Djibouti	403.04	366.40	366.40	402.78	473.39
Egypt	18.81	18.81	18.81	18.81	18.81
Iraq					
Jordan	85.82	85.82	81.76	81.76	91.99
Kuwait					
Lebanon	53.30	53.76	53.76	43.81	53.76
Libya	99.35	99.35	68.05	68.05	68.05
Mauritania	75.33	88.78	88.78	88.78	88.78
Morocco	22.00	22.00	22.90	22.60	22.48
Oman	217.56	217.56	207.20	207.20	138.56
Palestine	79.35	79.35	79.35	79.35	
Qatar	340.56	340.56	340.56	340.56	271.01
Saudi Arabia	133.56	127.20	116.14	116.14	194.23
Somalia					
Sudan					69.05
Syria					
Tunisia	84.67	84.67	75.02	75.02	52.51
UAE	180.69	348.36	348.36	368.49	368.49
Yemen	97.36	97.36	97.36	97.36	97.36

Arab average	141.61	149.55	145.70	148.42	162.27
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	13	12	12	12	12
Bahrain	5	4	6	6	15
Comoros	15	14	14	14	13
Djibouti	17	17	17	17	17
Egypt	1	1	1	1	1
Iraq			-	-	-
Jordan	8	7	8	8	8
Kuwait		-	-	-	-
Lebanon	3	3	3	3	4
Libya	10	10	4	4	5
Mauritania	4	8	9	9	7
Morocco	2	2	2	2	2
Oman	14	13	13	13	10
Palestine	6	5	7	7	-
Qatar	16	15	15	15	14
Saudi Arabia	11	11	11	11	11
Somalia					
Sudan					6
Syria	-	-	-	-	-
Tunisia	7	6	5	5	3
UAE	12	16	16	16	16
Yemen	9	9	10	10	9

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS >=10 MB/S LOW USAGE



Results for Fixed Broadband: OECD Low 10 GB / >=10 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria	1,356.76	1,333.96	1,333.96	1,333.96	205.22
Bahrain	581.19	581.19	581.19	581.19	317.01
Comoros	3,028.99	3,028.99	3,028.99	3,028.99	3,028.99
Djibouti	580.88	528.08	528.08	580.62	682.62
Egypt	31.69	31.69	31.69	31.69	31.69
Iraq					
Jordan	136.92	132.66	102.21	102.21	91.99
Kuwait					
Lebanon	53.30	53.76	53.76	53.76	53.76
Libya					
Mauritania	337.36	415.24	415.24	415.24	415.24
Morocco	43.62	43.62	44.52	44.22	44.10
Oman	871.04	337.69	321.61	321.61	184.32
Palestine	158.71	158.71	158.71	158.71	
Qatar	340.56	340.56	340.56	340.56	271.01
Saudi Arabia	164.53	156.69	143.07	143.07	194.23
Somalia					
Sudan					326.27
Syria					
Tunisia	127.54	127.54	96.46	96.46	73.95
UAE	317.68	348.36	348.36	368.49	368.49
Yemen					

Arab average	542.05	507.92	501.89	506.72	419.26
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	14	14	14	14	8
Bahrain	12	13	13	13	10
Comoros	15	15	15	15	15
Djibouti	11	12	12	12	14
Egypt	1	1	1	1	1
Iraq			-	-	-
Jordan	5	5	5	5	5
Kuwait		-	-	-	-
Lebanon	3	3	3	3	3
Libya	-	-	-	-	-
Mauritania	9	11	11	11	13
Morocco	2	2	2	2	2
Oman	13	8	8	8	6
Palestine	6	7	7	7	-
Qatar	10	9	9	9	9
Saudi Arabia	7	6	6	6	7
Somalia					
Sudan					11
Syria	-	-	-	-	-
Tunisia	4	4	4	4	4
UAE	8	10	10	10	12
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS >=10 MB/S MEDIUM USAGE



Results for Fixed Broadband: OECD Medium 30 GB / >=10 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria	1,356.76	1,333.96	1,333.96	1,333.96	205.22
Bahrain	581.19	581.19	581.19	581.19	317.01
Comoros	3,028.99	3,028.99	3,028.99	3,028.99	3,028.99
Djibouti	580.88	528.08	528.08	580.62	682.62
Egypt	31.69	31.69	31.69	31.69	31.69
Iraq					
Jordan	136.92	132.66	102.21	102.21	91.99
Kuwait					
Lebanon	53.30	53.76	53.76	53.76	53.76
Libya					
Mauritania	337.36	415.24	415.24	415.24	415.24
Morocco	43.62	43.62	44.52	44.22	44.10
Oman	871.04	337.69	321.61	321.61	184.32
Palestine	158.71	158.71	158.71	158.71	
Qatar	340.56	340.56	340.56	340.56	271.01
Saudi Arabia	164.53	156.69	143.07	143.07	194.23
Somalia					
Sudan					326.27
Syria					
Tunisia	127.54	127.54	96.46	96.46	73.95
UAE	326.51	348.36	348.36	368.49	368.49
Yemen					

Arab average	542.64	507.92	501.89	506.72	419.26
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	14	14	14	14	8
Bahrain	12	13	13	13	10
Comoros	15	15	15	15	15
Djibouti	11	12	12	12	14
Egypt	1	1	1	1	1
Iraq			-	-	-
Jordan	5	5	5	5	5
Kuwait		-	-	-	-
Lebanon	3	3	3	3	3
Libya	-	-	-	-	-
Mauritania	9	11	11	11	13
Morocco	2	2	2	2	2
Oman	13	8	8	8	6
Palestine	6	7	7	7	-
Qatar	10	9	9	9	9
Saudi Arabia	7	6	6	6	7
Somalia					
Sudan					11
Syria	-	-	-	-	-
Tunisia	4	4	4	4	4
UAE	8	10	10	10	12
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS >=10 MB/S HIGH USAGE



Results for Fixed Broadband: OECD High 90 GB / >=10 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria	1,356.76	1,333.96	1,333.96	1,333.96	205.22
Bahrain	581.19	581.19	581.19	581.19	317.01
Comoros	3,028.99	3,028.99	3,028.99	3,028.99	3,028.99
Djibouti	580.88	528.08	528.08	580.62	682.62
Egypt	31.69	31.69	31.69	31.69	31.69
Iraq					
Jordan	136.92	132.66	102.21	102.21	91.99
Kuwait					
Lebanon	78.17	78.63	78.63	53.76	78.63
Libya					
Mauritania	337.36	415.24	415.24	415.24	415.24
Morocco	43.62	43.62	44.52	44.22	44.10
Oman	871.04	337.69	321.61	321.61	184.32
Palestine	158.71	158.71	158.71	158.71	
Qatar	340.56	340.56	340.56	340.56	271.01
Saudi Arabia	164.53	156.69	143.07	143.07	194.23
Somalia					
Sudan					326.27
Syria					
Tunisia	127.54	127.54	96.46	96.46	73.95
UAE	326.51	348.36	348.36	368.49	368.49
Yemen					

Arab average	544.30	509.57	503.55	506.72	420.92
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	14	14	14	14	8
Bahrain	12	13	13	13	10
Comoros	15	15	15	15	15
Djibouti	11	12	12	12	14
Egypt	1	1	1	1	1
Iraq			-	-	-
Jordan	5	5	5	5	5
Kuwait		-	-	-	-
Lebanon	3	3	3	3	4
Libya	-	-	-	-	-
Mauritania	9	11	11	11	13
Morocco	2	2	2	2	2
Oman	13	8	8	8	6
Palestine	6	7	7	7	-
Qatar	10	9	9	9	9
Saudi Arabia	7	6	6	6	7
Somalia					
Sudan					11
Syria	-	-	-	-	-
Tunisia	4	4	4	4	3
UAE	8	10	10	10	12
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS >=25 MB/S LOW USAGE



Results for Fixed Broadband: OECD Low 20 GB / >=25 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria					1,333.96
Bahrain	1,690.72	1,690.72	1,690.72	1,690.72	528.35
Comoros					
Djibouti	1,647.92	1,627.55	1,627.55	1,777.10	2,067.40
Egypt					
Iraq					
Jordan	167.16	167.16	135.93	135.93	91.99
Kuwait					
Lebanon		136.35	136.35	136.35	136.35
Libya					
Mauritania					
Morocco	108.71	108.71	110.20	110.21	110.21
Oman	2,211.65	1,346.74	1,282.61	1,282.61	687.70
Palestine	742.75	742.75	742.75	742.75	
Qatar	870.19	870.19	533.15	340.56	271.01
Saudi Arabia	226.46	215.67	196.92	196.92	194.23
Somalia					
Sudan					
Syria					
Tunisia					107.17
UAE	635.84	368.49	368.49	368.49	368.49
Yemen					

Arab average	922.38	727.44	682.47	678.17	536.08
--------------	--------	--------	--------	--------	--------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	-	-	10
Bahrain	8	10	10	9	8
Comoros	-	-	-	-	-
Djibouti	7	9	9	10	11
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	2	3	2	2	1
Kuwait	-	-	-	-	-
Lebanon	-	2	3	3	4
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	1	1	1	1	3
Oman	9	8	8	8	9
Palestine	5	6	7	7	-
Qatar	6	7	6	5	6
Saudi Arabia	3	4	4	4	5
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	2
UAE	4	5	5	6	7
Yemen	-	-	-	-	-

Least expensive
 Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS >=25 MB/S MEDIUM USAGE



Results for Fixed Broadband: OECD Medium 60 GB / >=25 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria					1,333.96
Bahrain	1,690.72	1,690.72	1,690.72	1,690.72	528.35
Comoros					
Djibouti	1,647.92	1,627.55	1,627.55	1,777.10	2,067.40
Egypt					
Iraq					
Jordan	167.16	167.16	135.93	135.93	91.99
Kuwait					
Lebanon		136.35	136.35	136.35	136.35
Libya					
Mauritania					
Morocco	108.71	108.71	110.20	110.21	110.21
Oman	2,211.65	1,346.74	1,282.61	1,282.61	687.70
Palestine	742.75	742.75	742.75	742.75	
Qatar	870.19	870.19	533.15	340.56	271.01
Saudi Arabia	226.46	215.67	196.92	196.92	194.23
Somalia					
Sudan					
Syria					
Tunisia					107.17
UAE	635.84	368.49	368.49	368.49	368.49
Yemen					

Arab average	922.38	727.44	682.47	678.17	536.08
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	-	-	10
Bahrain	8	10	10	9	8
Comoros	-	-	-	-	-
Djibouti	7	9	9	10	11
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	2	3	2	2	1
Kuwait	-	-	-	-	-
Lebanon	-	2	3	3	4
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	1	1	1	1	3
Oman	9	8	8	8	9
Palestine	5	6	7	7	-
Qatar	6	7	6	5	6
Saudi Arabia	3	4	4	4	5
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	2
UAE	4	5	5	6	7
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS >=25 MB/S HIGH USAGE



Results for Fixed Broadband: OECD High 180 GB / >=25 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria					1,333.96
Bahrain	1,690.72	1,690.72	1,690.72	1,690.72	528.35
Comoros					
Djibouti	1,647.92	1,627.55	1,627.55	1,777.10	2,067.40
Egypt					
Iraq					
Jordan	167.16	167.16	135.93	135.93	91.99
Kuwait					
Lebanon		136.35	136.35	136.35	136.35
Libya					
Mauritania					
Morocco	108.71	108.71	110.20	110.21	110.21
Oman	2,211.65	1,346.74	1,282.61	1,282.61	687.70
Palestine	742.75	742.75	742.75	742.75	
Qatar	870.19	870.19	533.15	340.56	271.01
Saudi Arabia	226.46	215.67	196.92	196.92	194.23
Somalia					
Sudan					
Syria					
Tunisia					107.17
UAE	635.84	368.49	368.49	368.49	368.49
Yemen					

Arab average	922.38	727.44	682.47	678.17	536.08
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	-	-	10
Bahrain	8	10	10	9	8
Comoros	-	-	-	-	-
Djibouti	7	9	9	10	11
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	2	3	2	2	1
Kuwait	-	-	-	-	-
Lebanon	-	2	3	3	4
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	1	1	1	1	3
Oman	9	8	8	8	9
Palestine	5	6	7	7	-
Qatar	6	7	6	5	6
Saudi Arabia	3	4	4	4	5
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	2
UAE	4	5	5	6	7
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS >=100 MB/S LOW USAGE



Results for Fixed Broadband: OECD Low 40 GB / >=100 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria					1,333.96
Bahrain					792.53
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan	235.30	167.16	135.93	135.93	132.53
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco	108.71	108.71	110.20	110.21	110.21
Oman	5,286.87	1,683.09	1,602.95	1,602.95	916.51
Palestine					
Qatar	870.19	870.19	870.19	533.15	367.31
Saudi Arabia	319.35	304.15	277.70	277.70	194.23
Somalia					
Sudan					
Syria					
Tunisia					171.48
UAE	1,329.63	680.03	494.44	442.14	470.13
Yemen					

Arab average	1358.34	635.56	581.90	517.01	498.76
--------------	---------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	-	-	9
Bahrain	-	-	-	-	7
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	2	2	2	2	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	1	1	1	1	1
Oman	6	6	6	6	8
Palestine	-	-	-	-	-
Qatar	4	5	5	5	5
Saudi Arabia	3	3	3	3	4
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	3
UAE	5	4	4	4	6
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS >=100 MB/S MEDIUM USAGE



Results for Fixed Broadband: OECD Medium 120 GB / >=100 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria					1,333.96
Bahrain					792.53
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan	235.30	167.16	135.93	135.93	132.53
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco	108.71	108.71	110.20	110.21	110.21
Oman	5,286.87	1,683.09	1,602.95	1,602.95	916.51
Palestine					
Qatar	870.19	870.19	870.19	533.15	367.31
Saudi Arabia	319.35	304.15	277.70	277.70	194.23
Somalia					
Sudan					
Syria					
Tunisia					171.48
UAE	1,329.63	680.03	494.44	442.14	470.13
Yemen					

Arab average	1358.34	635.56	581.90	517.01	498.76
--------------	---------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	-	-	9
Bahrain	-	-	-	-	7
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	2	2	2	2	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	1	1	1	1	1
Oman	6	6	6	6	8
Palestine	-	-	-	-	-
Qatar	4	5	5	5	5
Saudi Arabia	3	3	3	3	4
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	3
UAE	5	4	4	4	6
Yemen	-	-	-	-	-

■ Least expensive
■ Most expensive



2017 OECD FIXED BROADBAND BASKETS RANKING BUSINESS >=100 MB/S HIGH USAGE



Results for Fixed Broadband: OECD High 360 GB / >=100 Mb/s basket, 2017-2021
Results in USD / PPP per Month, VAT excluded, Business results

	2017	2018	2019	2020	2021
Algeria					1,333.96
Bahrain					792.53
Comoros					
Djibouti					
Egypt					
Iraq					
Jordan	235.30	167.16	135.93	135.93	132.53
Kuwait					
Lebanon					
Libya					
Mauritania					
Morocco	108.71	108.71	110.20	110.21	110.21
Oman	5,286.87	1,683.09	1,602.95	1,602.95	916.51
Palestine					
Qatar	870.19	870.19	870.19	533.15	367.31
Saudi Arabia	319.35	304.15	277.70	277.70	194.23
Somalia					
Sudan					
Syria					
Tunisia					171.48
UAE	1,329.63	680.03	494.44	442.14	470.13
Yemen					

Arab average	1358.34	635.56	581.90	517.01	498.76
--------------	---------	--------	--------	--------	--------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	-	-	-	-	9
Bahrain	-	-	-	-	7
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	-	-	-	-	-
Jordan	2	2	2	2	2
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	1	1	1	1	1
Oman	6	6	6	6	8
Palestine	-	-	-	-	-
Qatar	4	5	5	5	5
Saudi Arabia	3	3	3	3	4
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	3
UAE	5	4	4	4	6
Yemen	-	-	-	-	-

Least expensive
 Most expensive



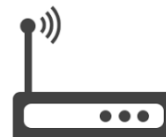
OBSERVATIONS FROM FIXED BROADBAND TIME SERIES RESULTS



- The table below summarizes how the overall Arab average changed from 2020-2021. The picture is one mainly of increases across many residential baskets – up to 15%, while for almost all business baskets, the overall average costs fell – up to -21%. For business services, >= 1000 Mb/s, results in this category are very limited and have been excluded.

Change in overall average 2020-2021	Residential			Business			Change in average 2020-2021 (Res: Inc VAT, Bus, Excl VAT)	
	Low	Medium	High	Low	Medium	High	Residential	Business
>= 0.25 Mb/s / 15 GB	↑	↑	↑	↓	↓	↑	12%	-9%
>= 10 Mb/s / 30 GB	↑	↑	↑	↓	↓	↓	15%	-17%
>= 25 Mb/s / 60 GB	↓	↓	↓	↓	↓	↓	-12%	-21%
>= 100 Mb/s / 120 GB	↑	↑	↑	↓	↓	↓	9%	-4%
>= 1000 Mb/s / 300 GB	↓	↓	↓				-17%	

- The average speed across all offers, all countries stands at around 183 Mb/s in 2021 (up from just under 70 Mb/s in 2020), with just under 60% of services greater than or equal to 20 Mb/s, up from 40% in 2020.
- There have been changes for most providers in the current update, largely in the form of new plans being added. This was the case in:
 - Bahrain
 - Djibouti
 - Egypt
 - Jordan
 - Libya
 - Oman
 - Tunisia





MOBILE BROADBAND BASKET RESULTS 2021



MOBILE BROADBAND BASKETS, 2017 DEFINITIONS

- There are 7 baskets OECD baskets for mobile broadband ranging from low to very high usage, and these are shown in the table below.

	Usage volume (GB/month)
0.5 GB basket	0.5
1 GB basket	1
2 GB basket	2
5 GB basket	5
10 GB basket	10
20 GB basket	20
50 GB basket	50

- There are also two special baskets which simulate short term usage

	Usage volume (GB/month)	Days of use per month
0.5 GB basket	0.5	15
1 GB basket	1	15

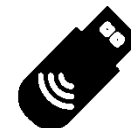
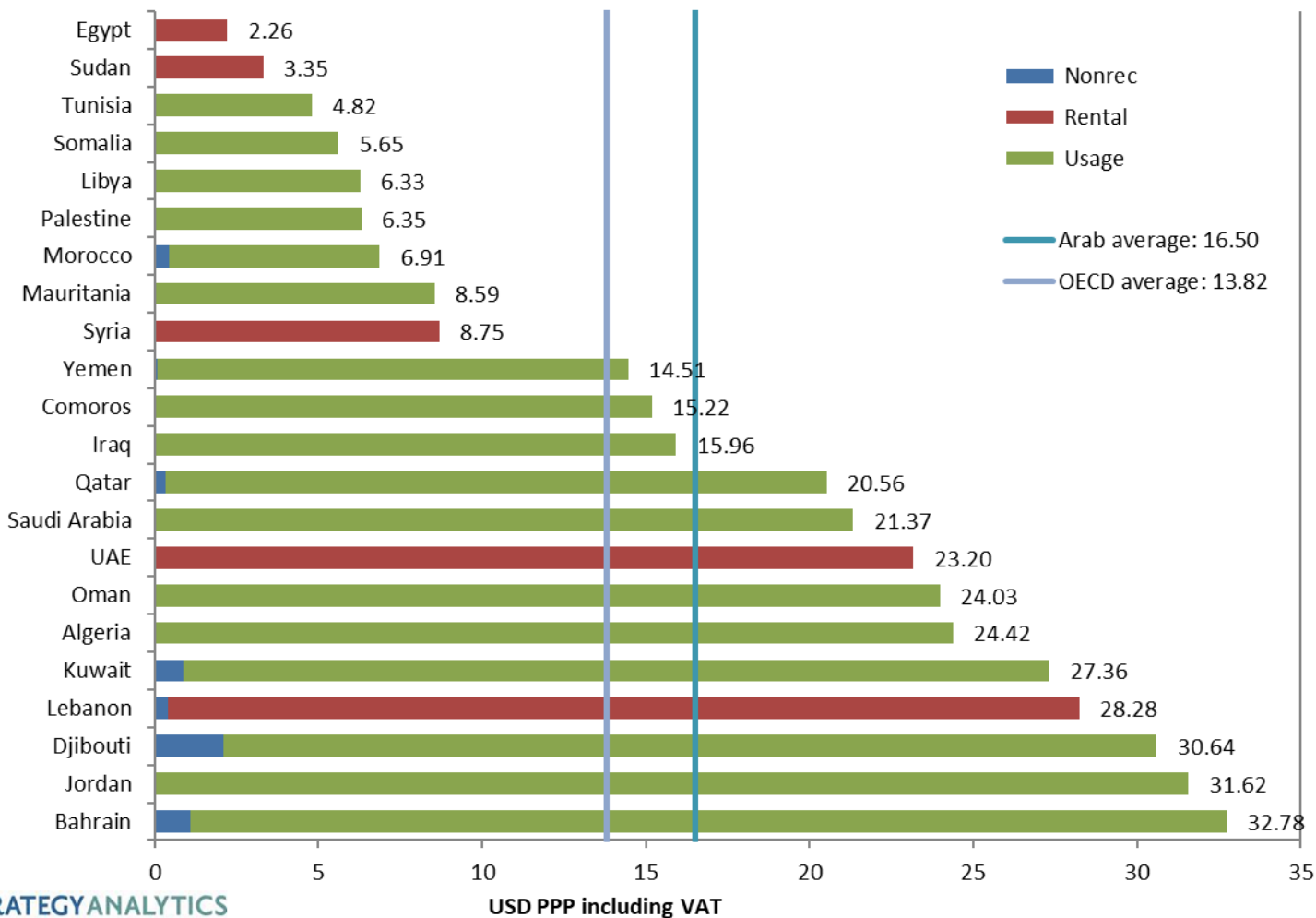
- Data collected refers to dedicated mobile broadband packages (i.e. not mobile broadband bundled with or added to mobile voice packages) , and up to three operators are considered



RESIDENTIAL MOBILE BROADBAND OECD 2017 0.5GB BASKET



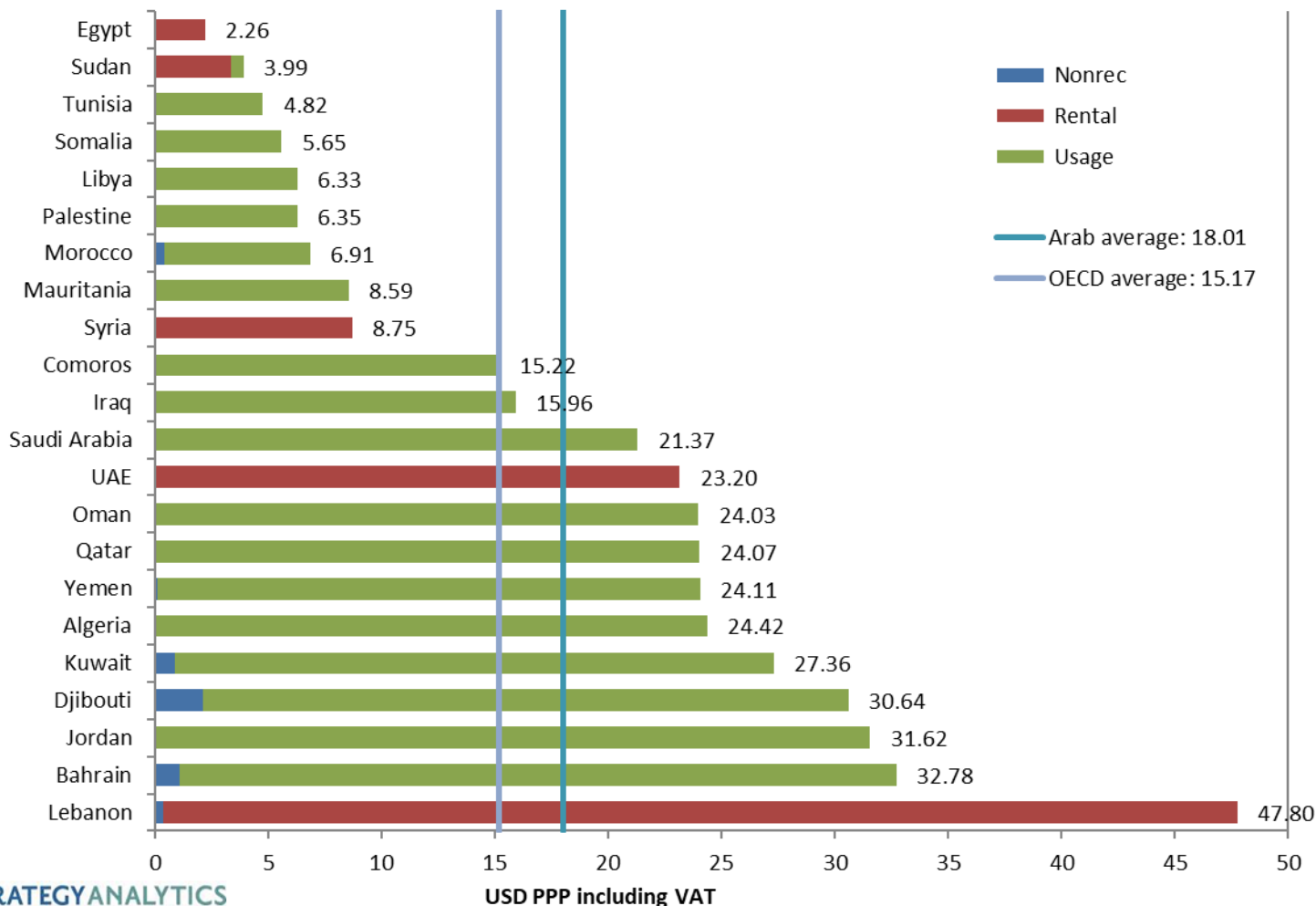
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 0.5 GB / 30 days per month, Residential



RESIDENTIAL MOBILE BROADBAND OECD 2017 1GB BASKET



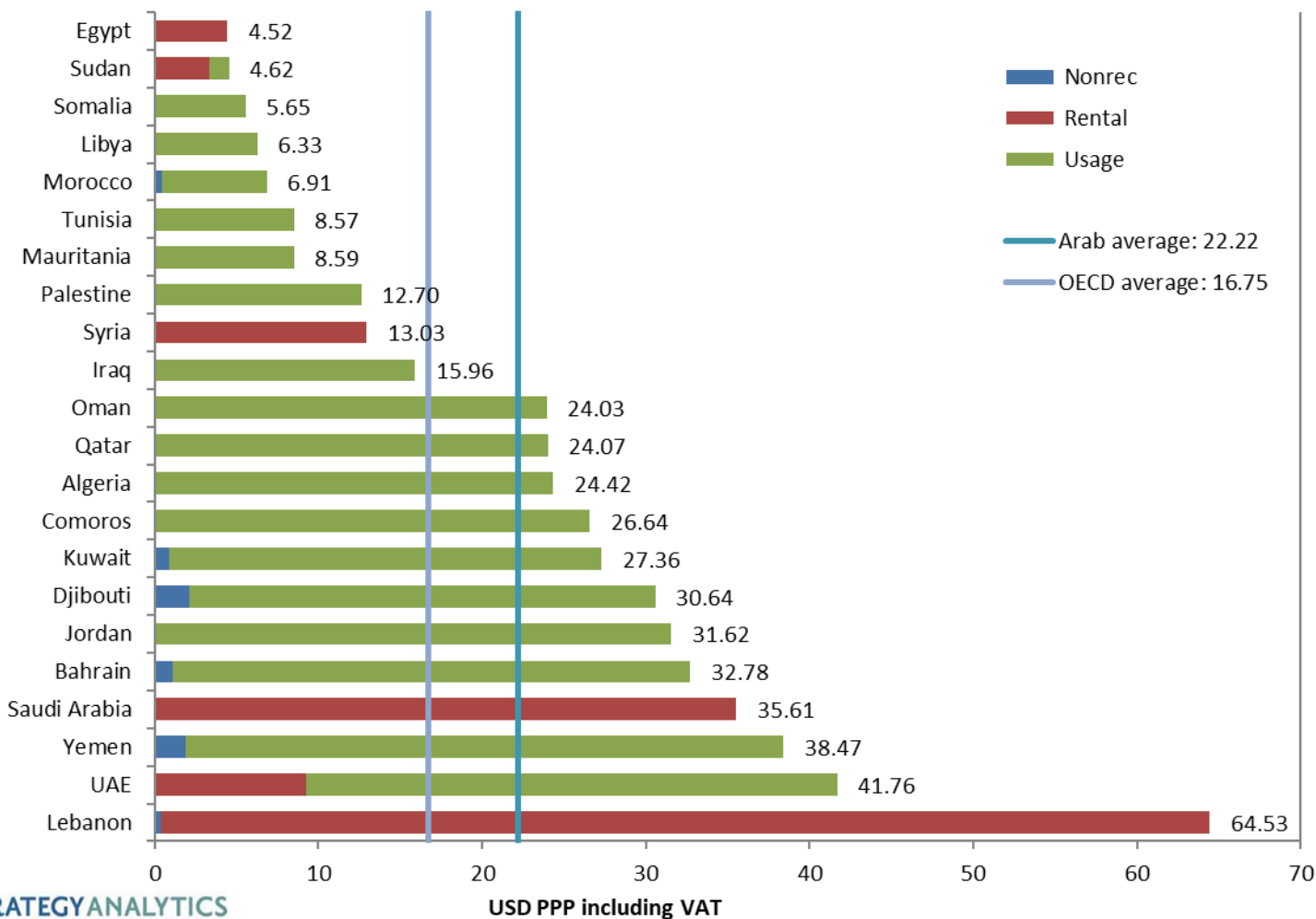
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 1 GB / 30 days per month, Residential



RESIDENTIAL MOBILE BROADBAND OECD 2017 2GB BASKET



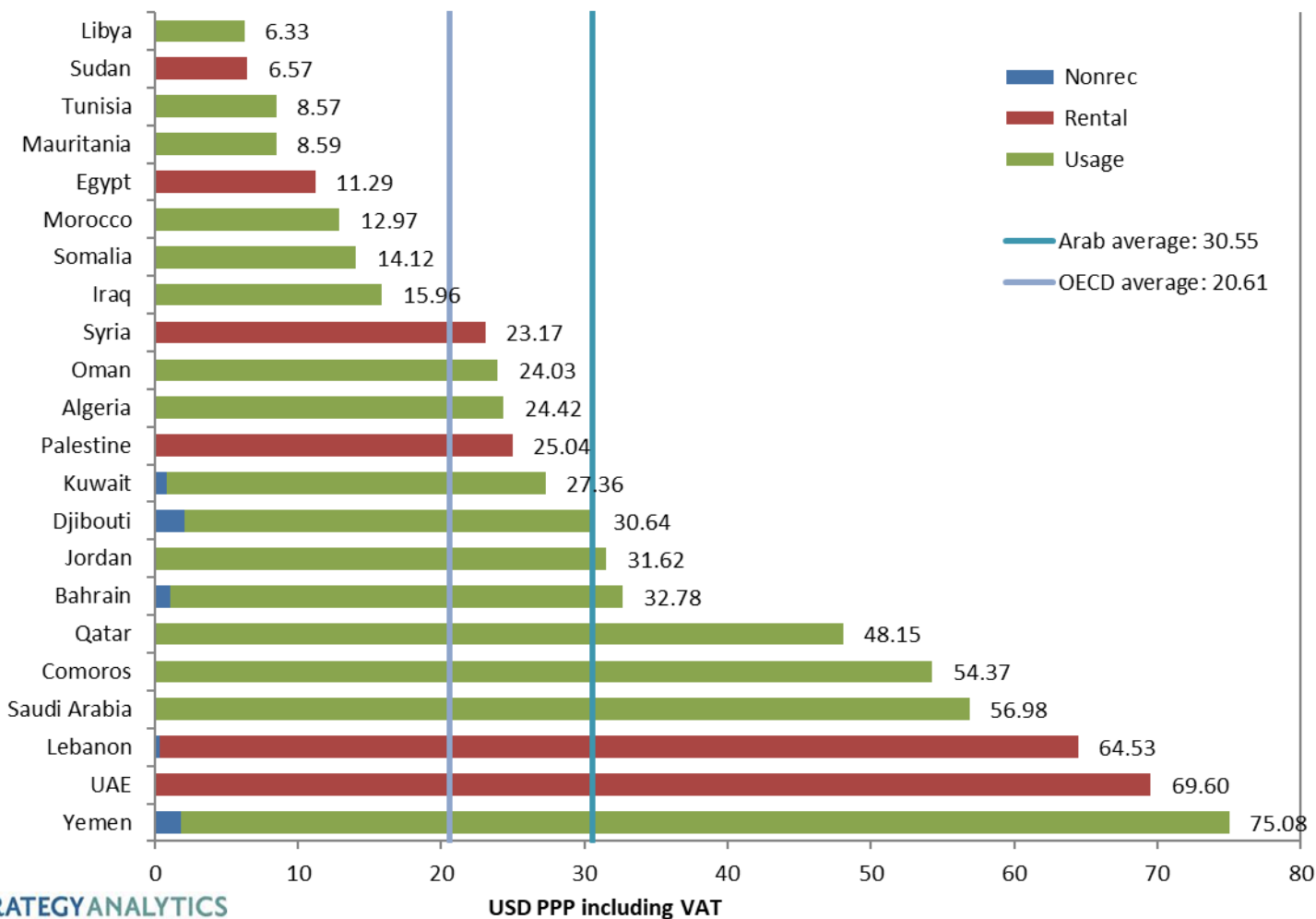
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 2 GB / 30 days per month, Residential



RESIDENTIAL MOBILE BROADBAND OECD 2017 5GB BASKET



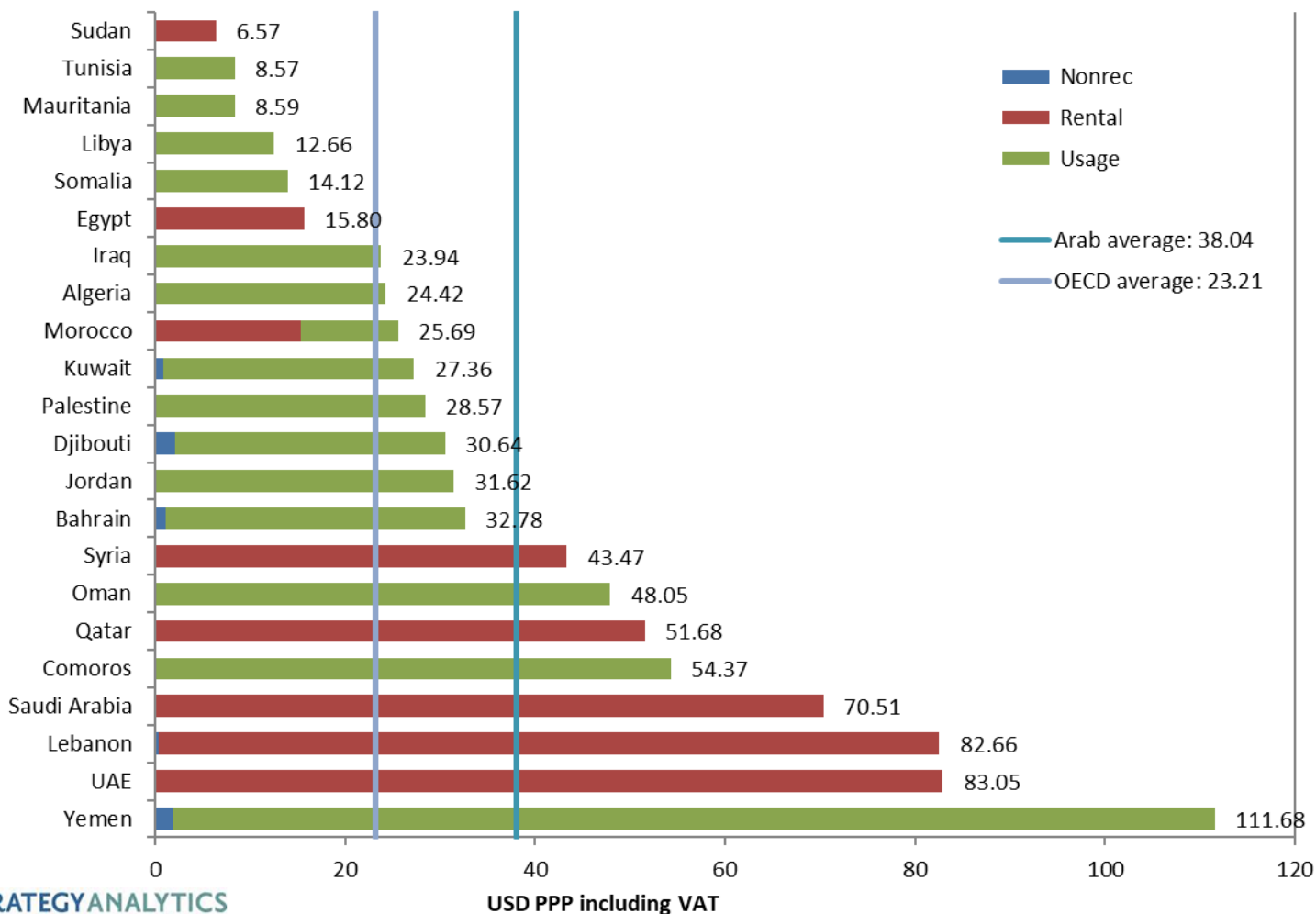
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 5 GB / 30 days per month, Residential



RESIDENTIAL MOBILE BROADBAND OECD 2017 10GB BASKET



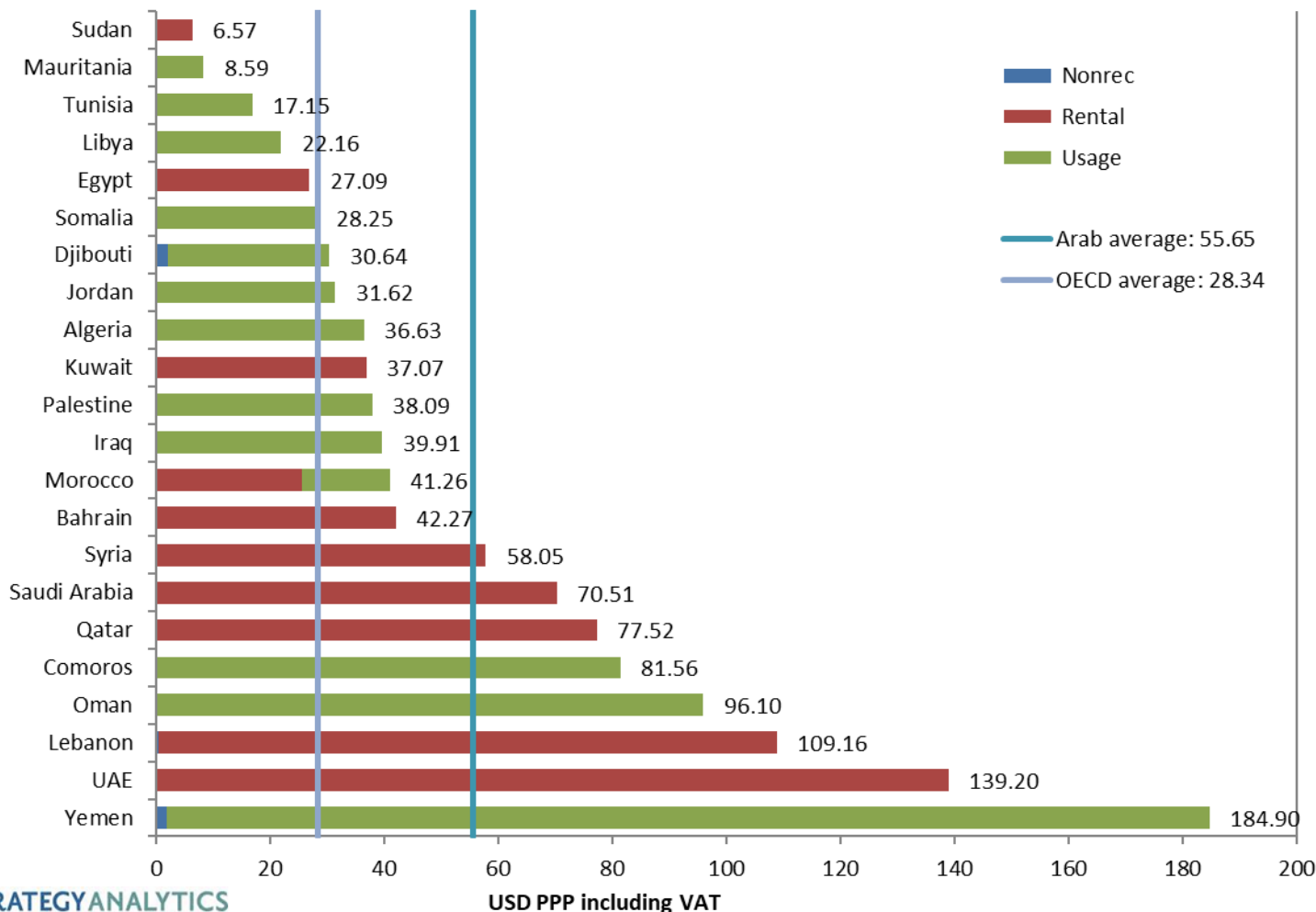
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 10 GB / 30 days per month, Residential



RESIDENTIAL MOBILE BROADBAND OECD 2017 20GB BASKET



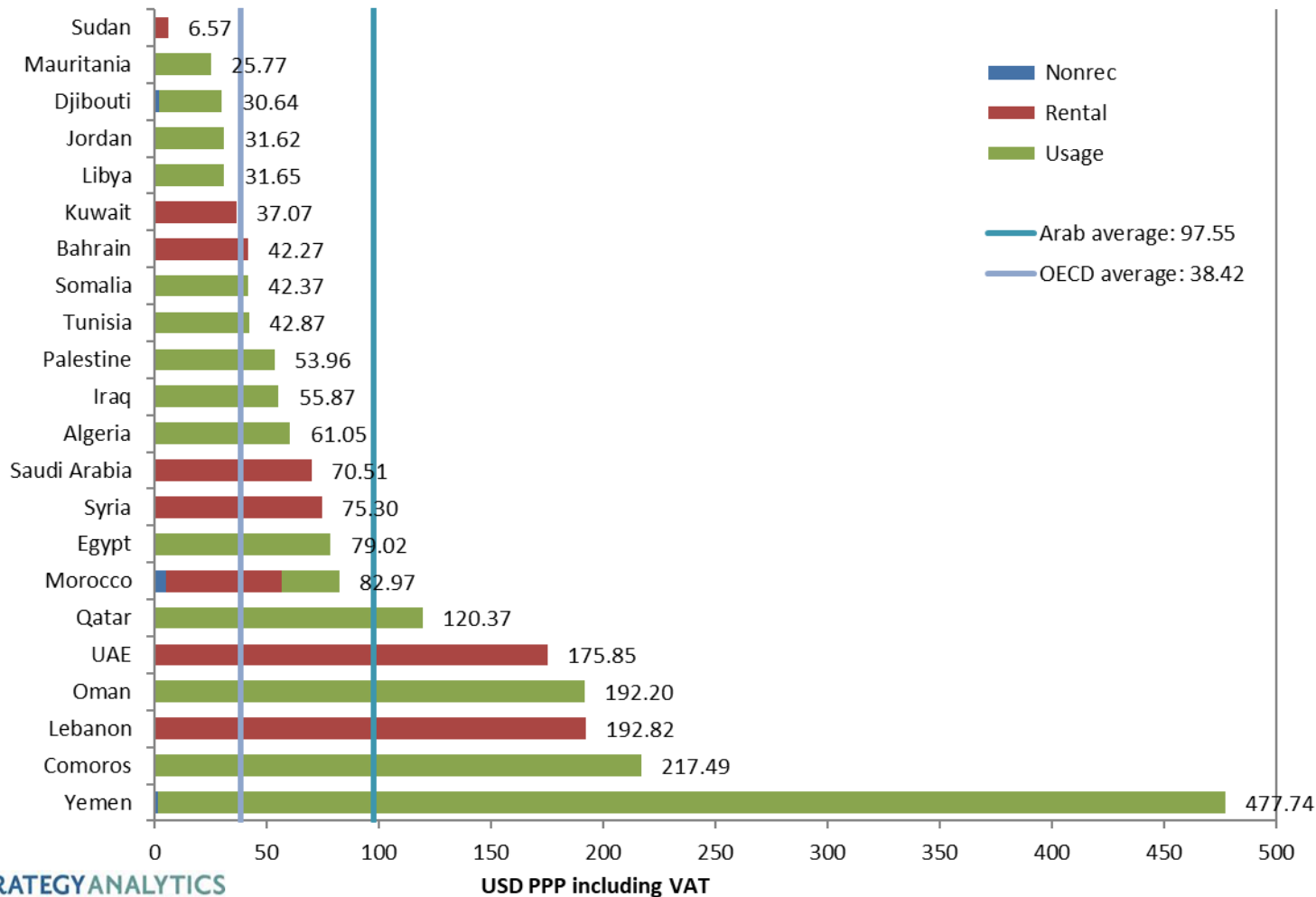
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 20 GB / 30 days per month, Residential



RESIDENTIAL MOBILE BROADBAND OECD 2017 50GB BASKET



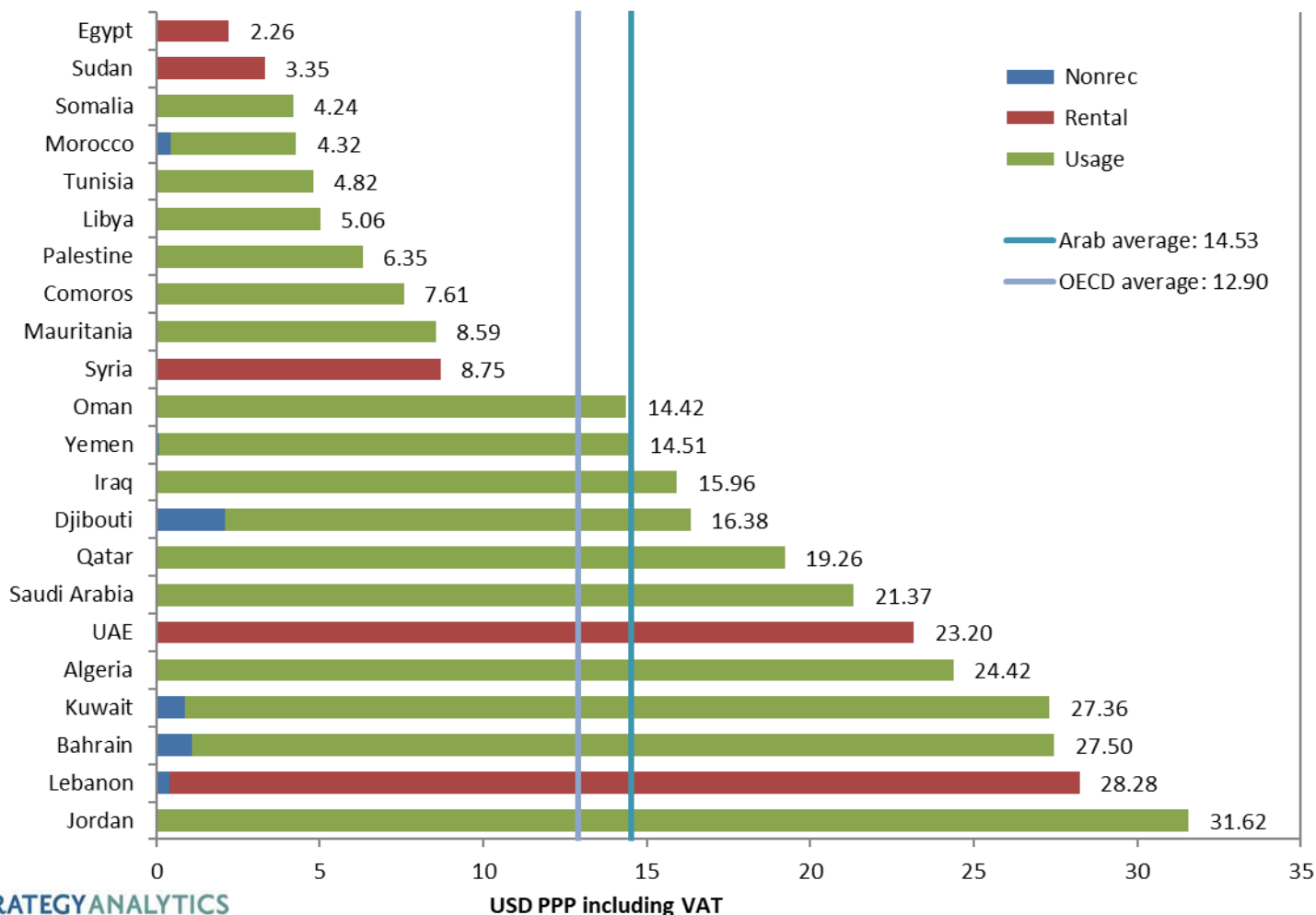
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 50 GB / 30 days per month, Residential



RESIDENTIAL MOBILE BROADBAND OECD 2017 SHORT VALIDITY 0.5GB BASKET



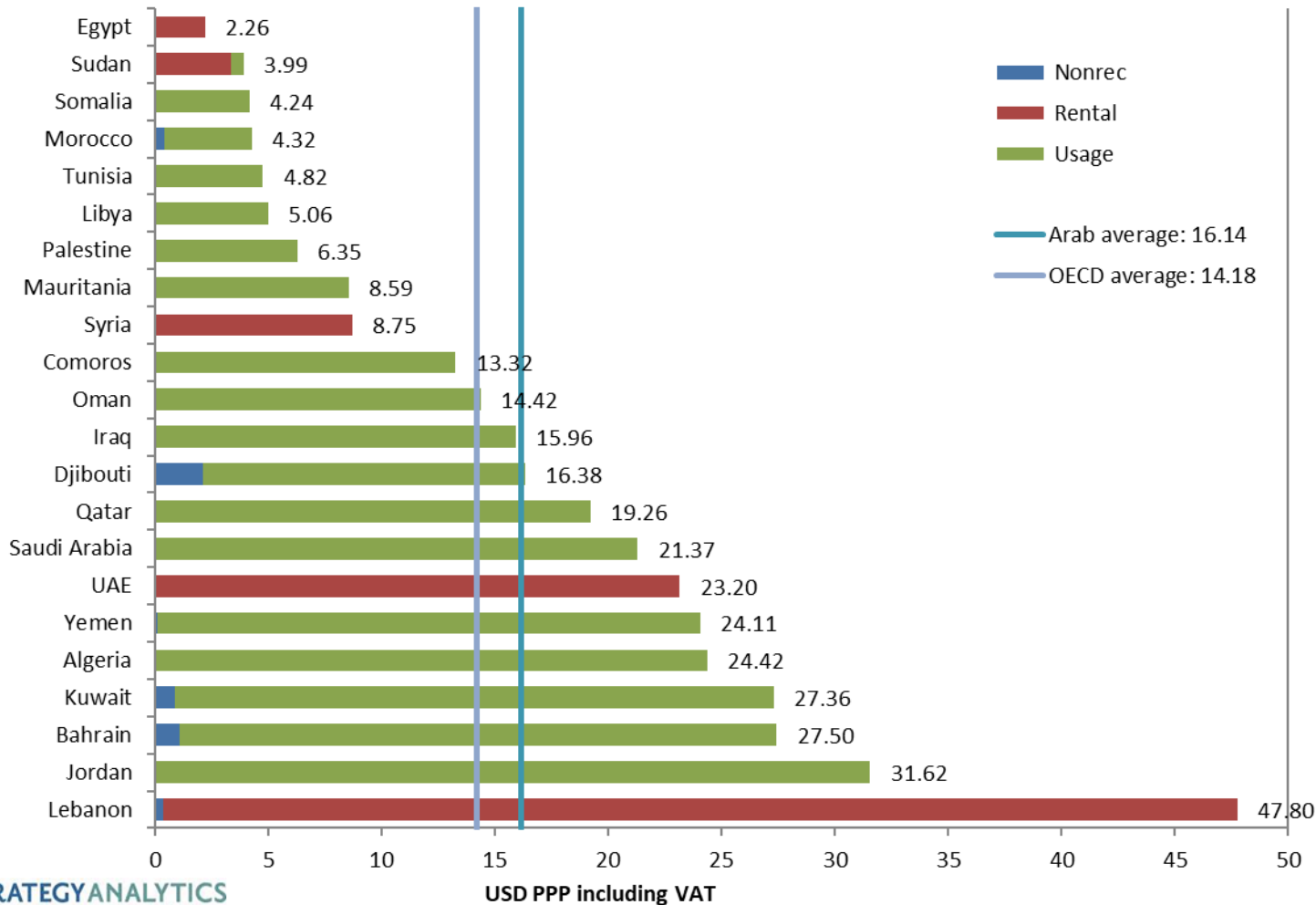
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 0.5 GB / 15 days per month, Residential



RESIDENTIAL MOBILE BROADBAND OECD 2017 SHORT VALIDITY 1GB BASKET



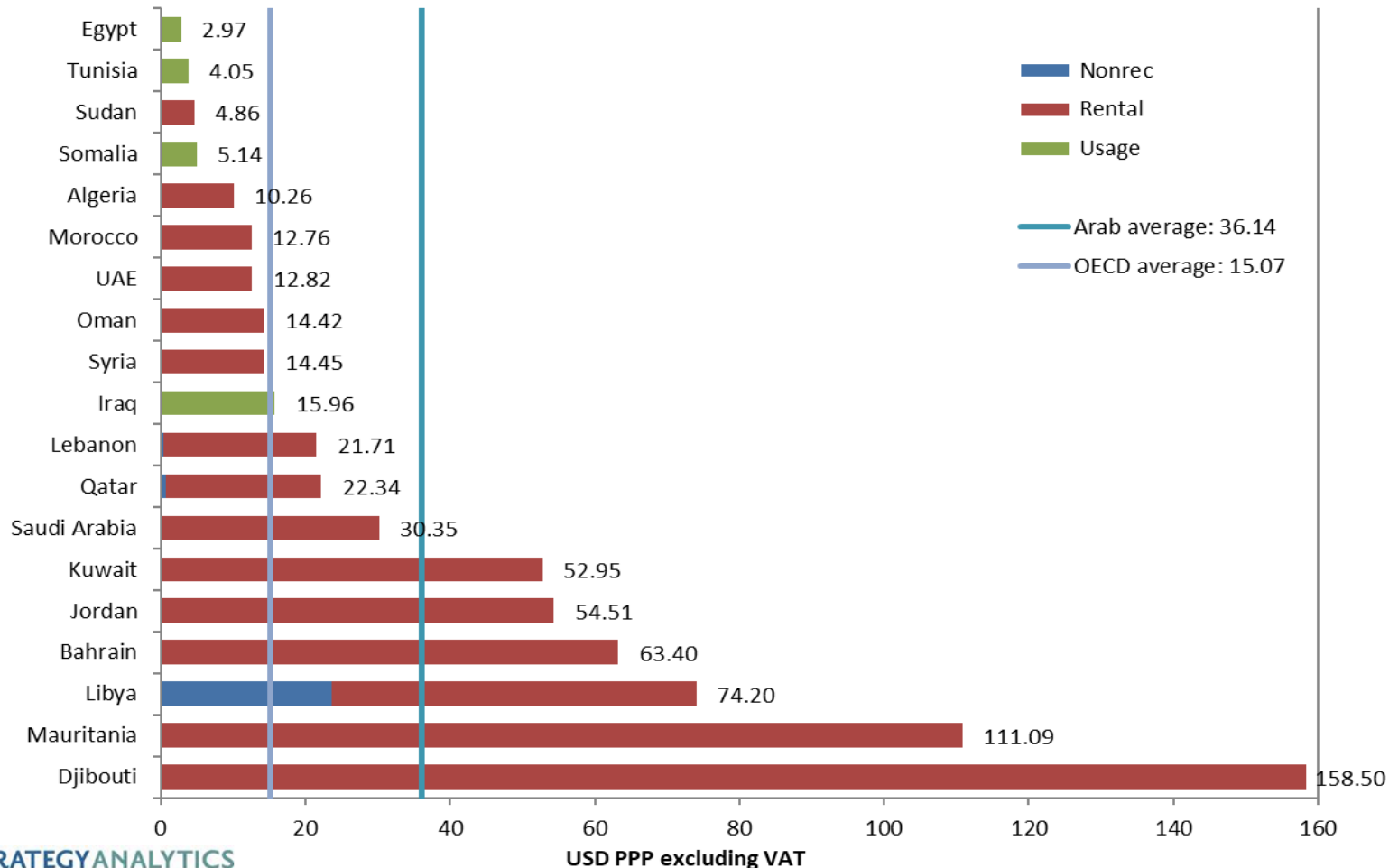
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 1 GB / 15 days per month, Residential



BUSINESS MOBILE BROADBAND OECD 2017 0.5GB BASKET



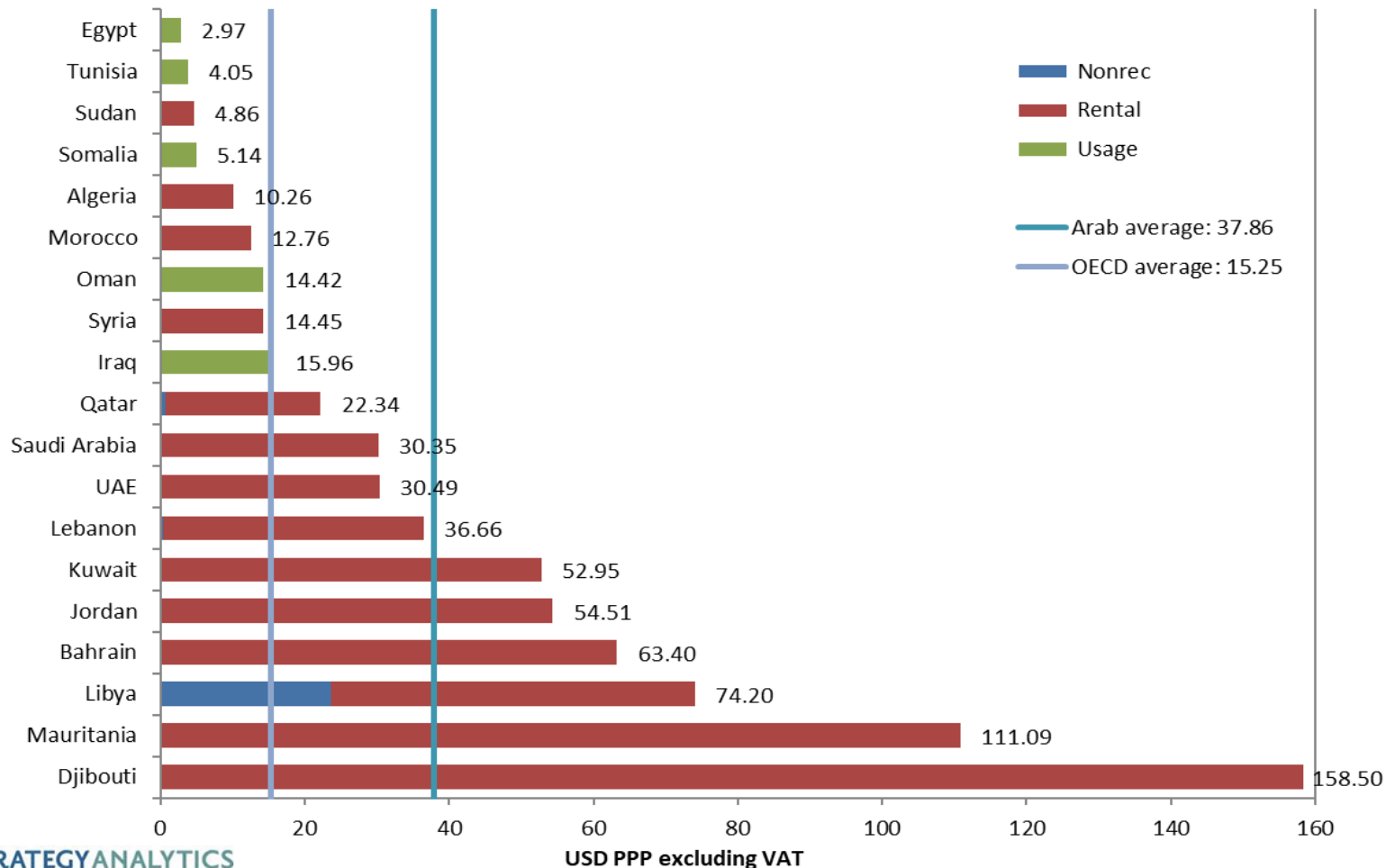
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 0.5 GB / 30 days per month, Business



BUSINESS MOBILE BROADBAND OECD 2017 1GB BASKET



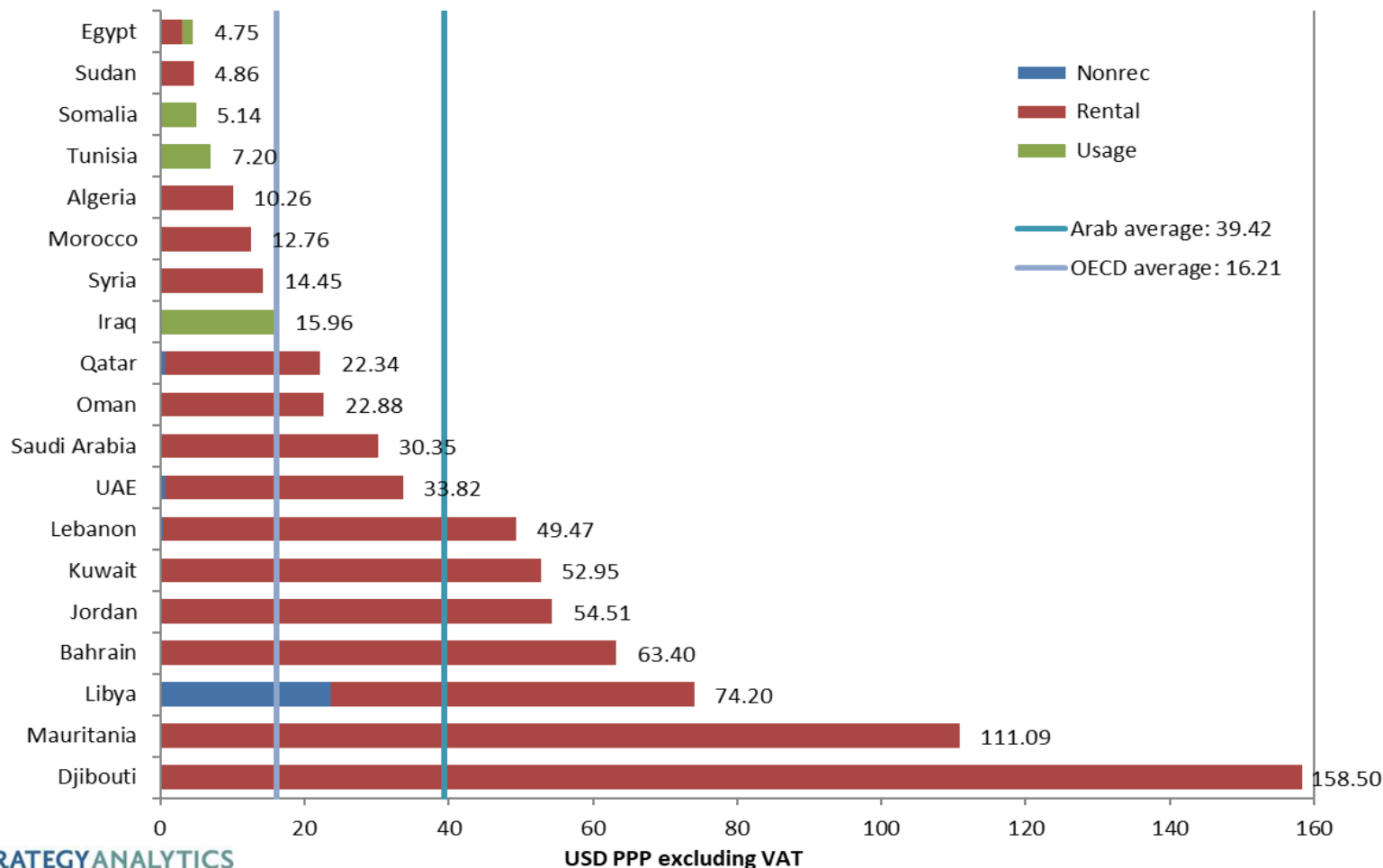
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 1 GB / 30 days per month, Business



BUSINESS MOBILE BROADBAND OECD 2017 2GB BASKET



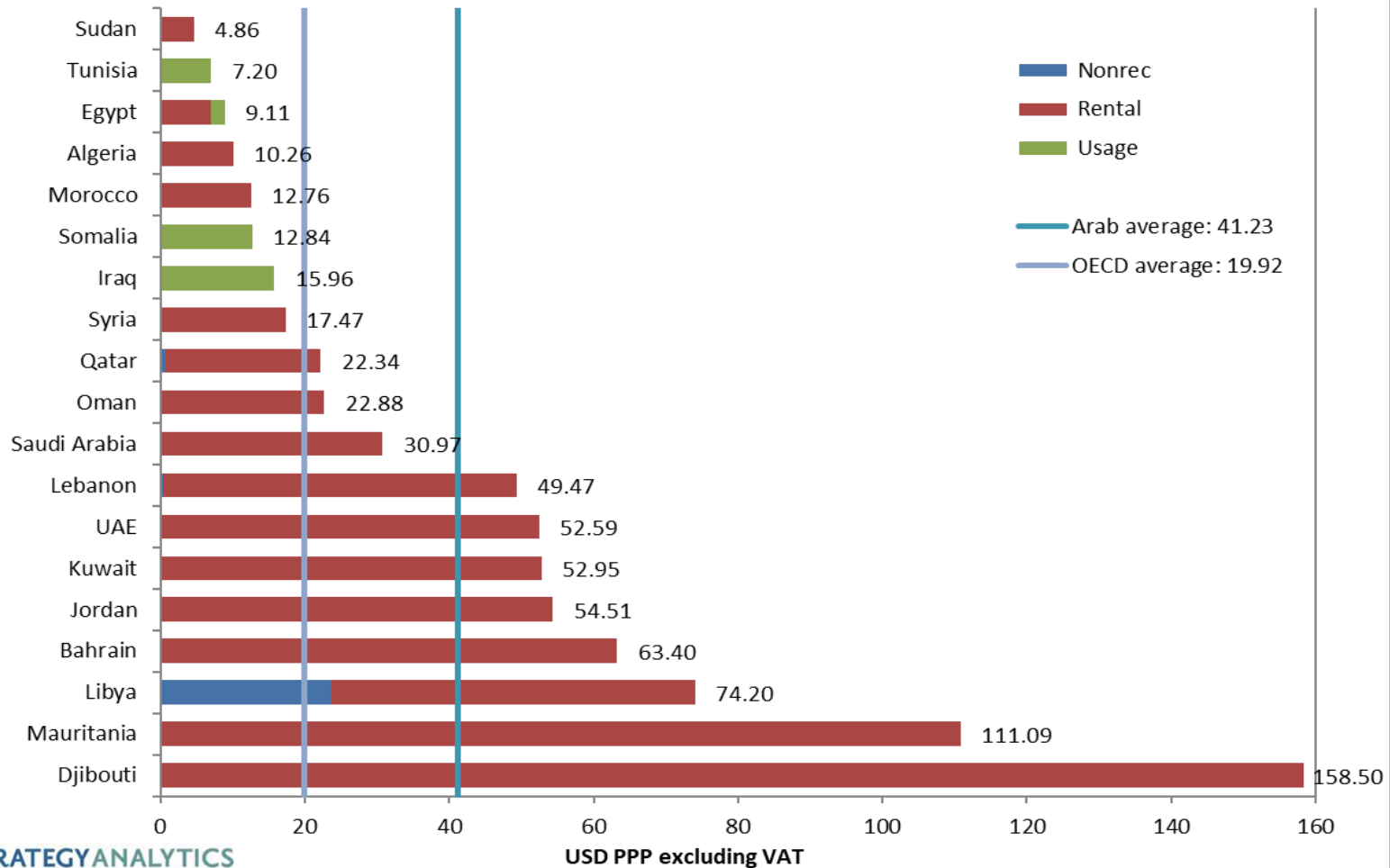
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 2 GB / 30 days per month, Business



BUSINESS MOBILE BROADBAND OECD 2017 5GB BASKET



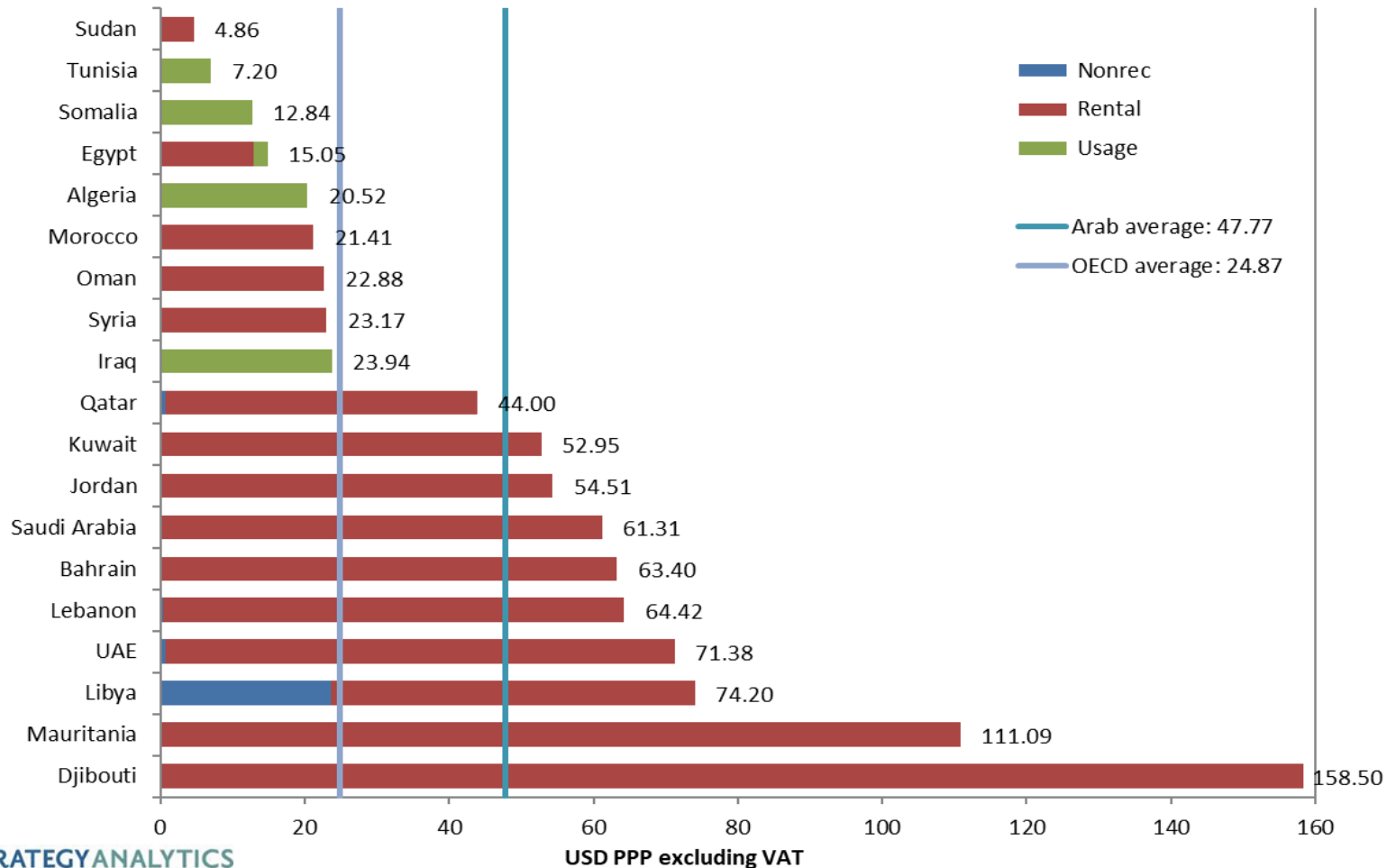
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 5 GB / 30 days per month, Business



BUSINESS MOBILE BROADBAND OECD 2017 10GB BASKET



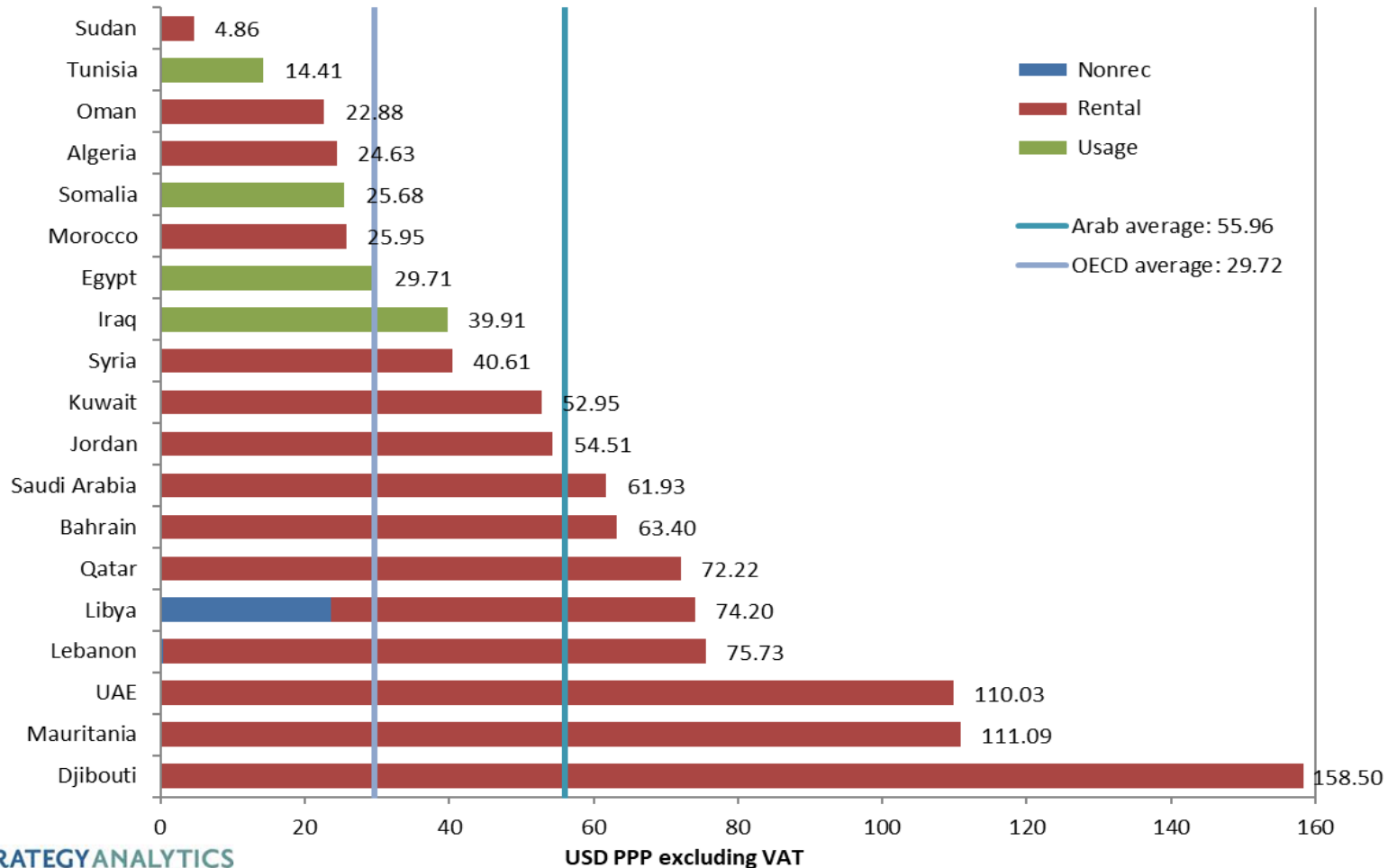
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 10 GB / 30 days per month, Business



BUSINESS MOBILE BROADBAND OECD 2017 20GB BASKET



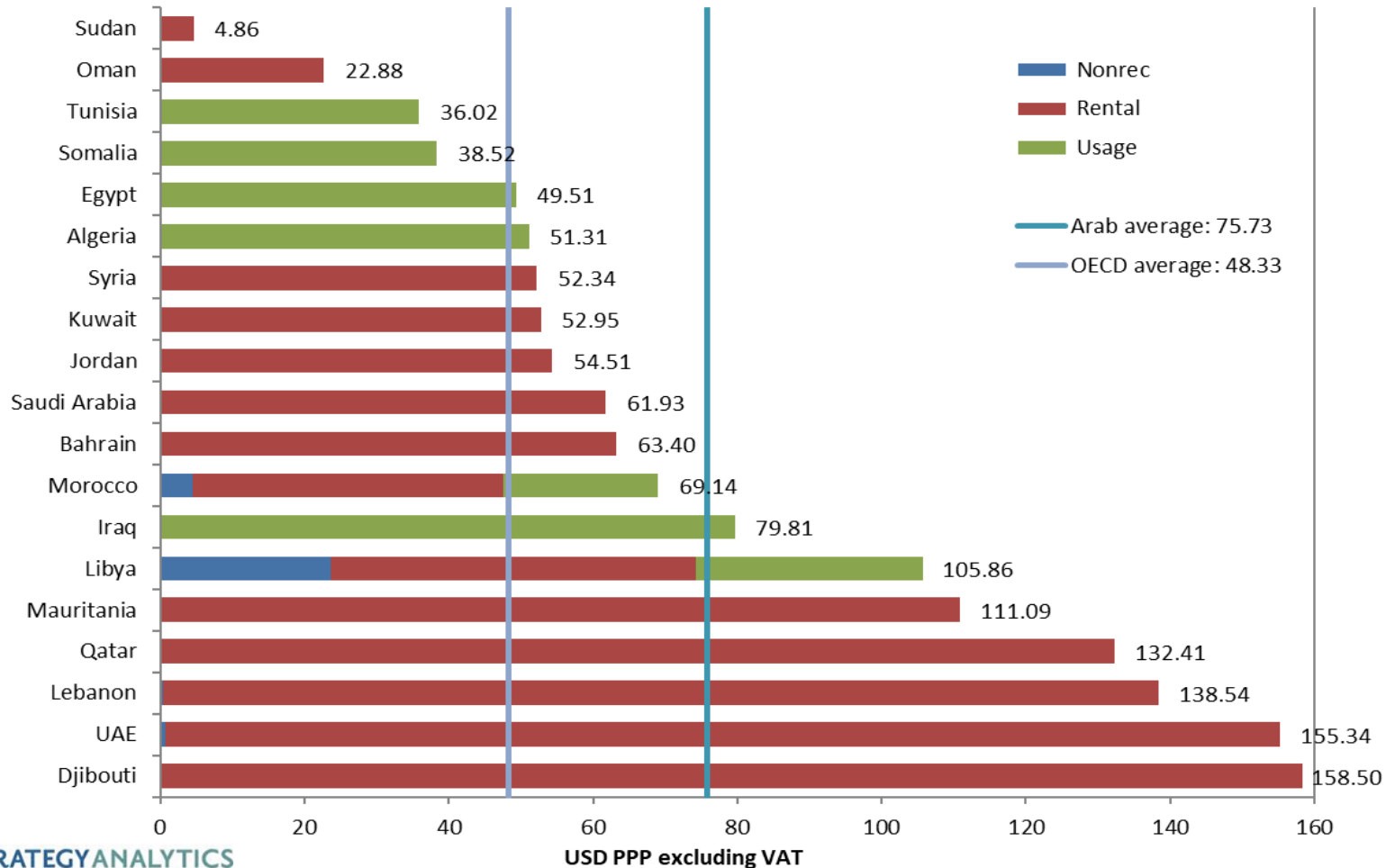
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 20 GB / 30 days per month, Business



BUSINESS MOBILE BROADBAND OECD 2017 50GB BASKET



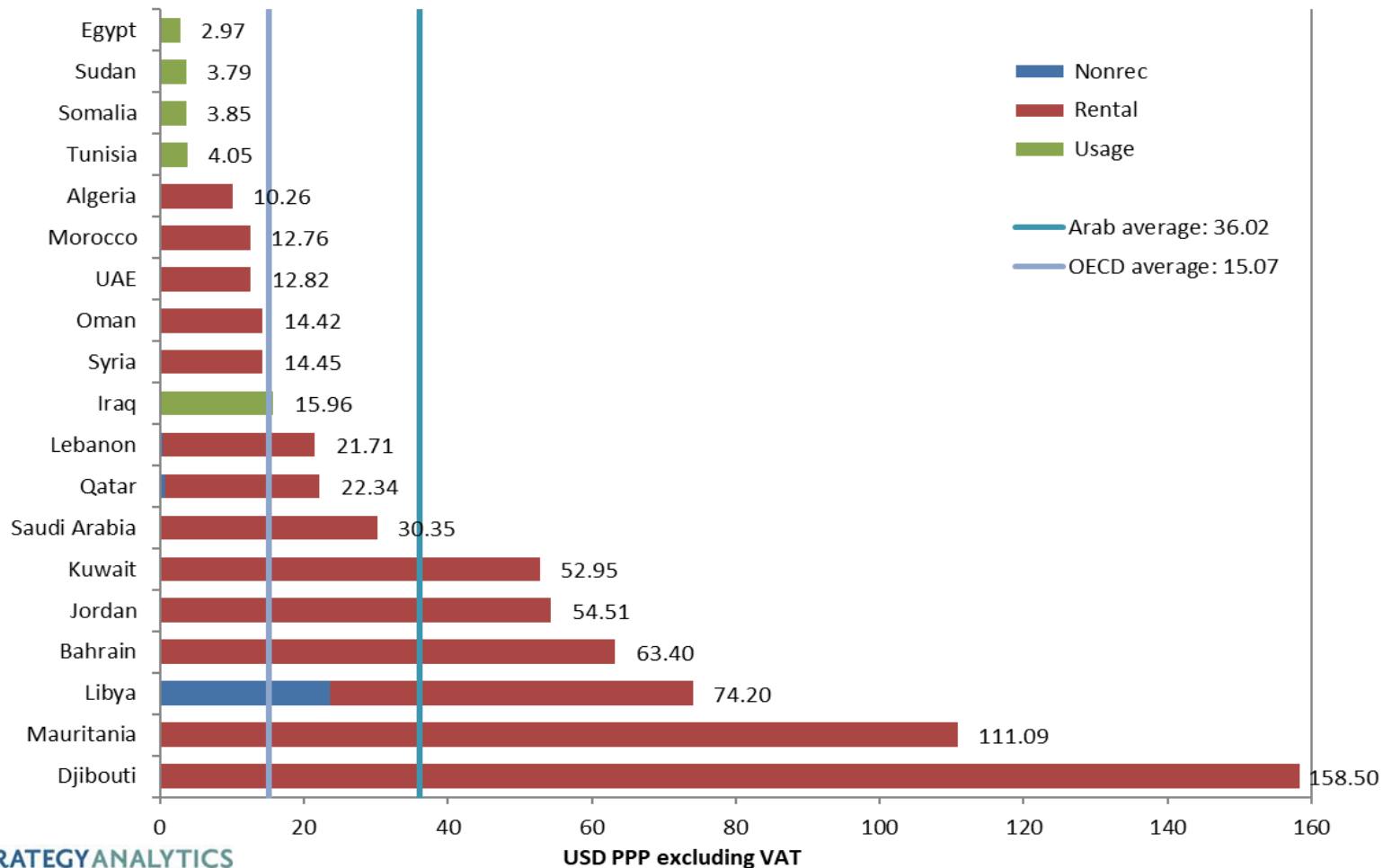
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 50 GB / 30 days per month, Business



BUSINESS MOBILE BROADBAND OECD 2017 SHORT VALIDITY 0.5GB BASKET



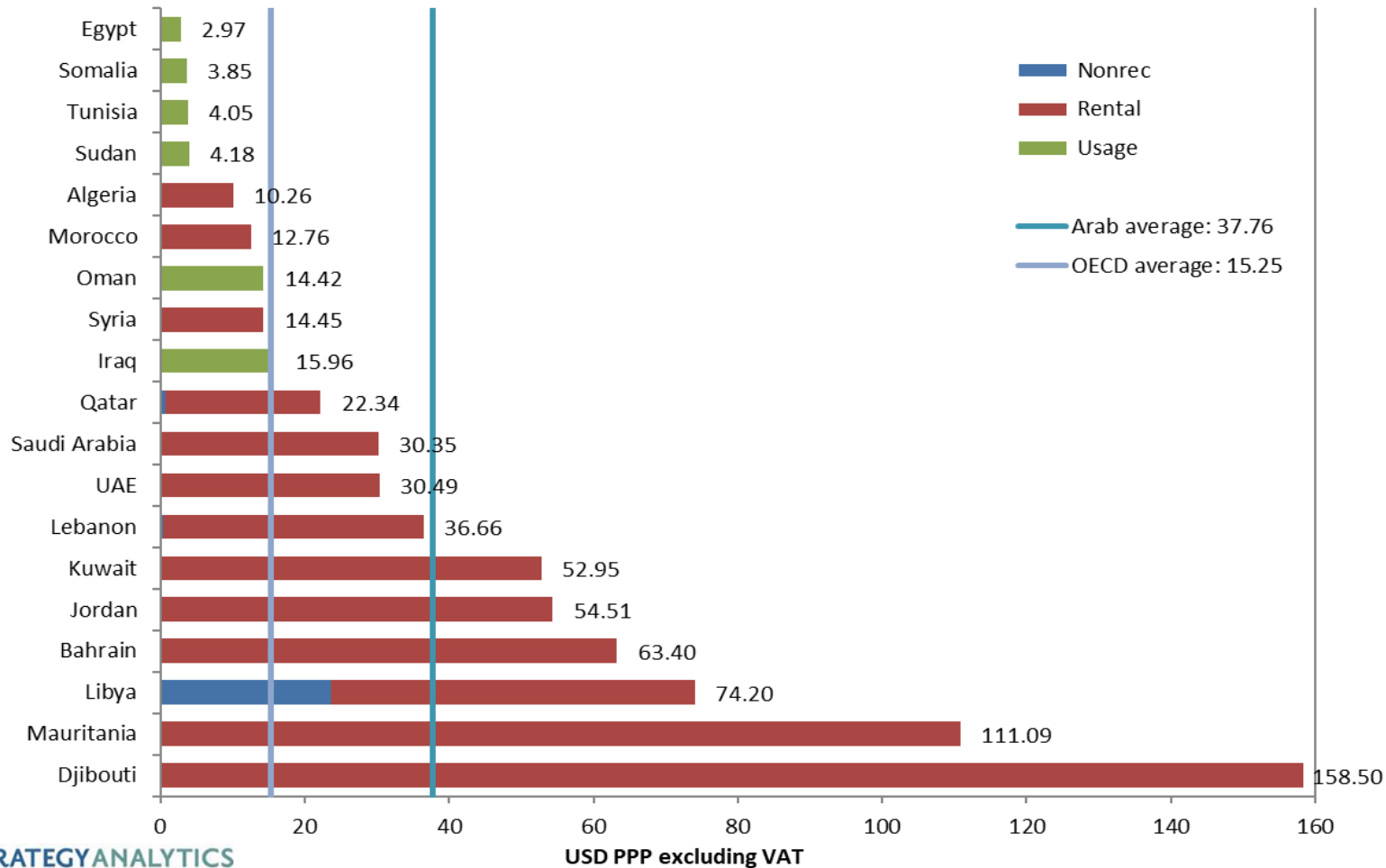
AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 0.5 GB / 15 days per month, Business



BUSINESS MOBILE BROADBAND OECD 2017 SHORT VALIDITY 1GB BASKET



AREGENET Mobile Broadband Price Benchmarking 2021
OECD 2017: 1 GB / 15 days per month, Business



OBSERVATIONS FROM MOBILE BROADBAND BASKET RESULTS



- Mobile broadband services are available across all the Arab countries.
- The table below on the left shows the 3 cheapest and 3 most expensive countries for each basket, each speed category, for both residential and business services, while the table on the right shows the average increased cost of mobile broadband services for both residential and business customers in the Arab countries compared to the OECD average.

		Cheapest			Most expensive																																						
		1st	2nd	3rd	1st	2nd	3rd																																				
Residential	0.5 GB	Egypt	Sudan	Tunisia	Bahrain	Jordan	Djibouti	<table border="1"> <thead> <tr> <th colspan="3">Arab:OECD average</th> </tr> <tr> <th>Residential</th> <th>Business</th> <th></th> </tr> </thead> <tbody> <tr> <td>0.5 GB</td> <td>19%</td> <td>140%</td> </tr> <tr> <td>1 GB</td> <td>19%</td> <td>148%</td> </tr> <tr> <td>2 GB</td> <td>33%</td> <td>143%</td> </tr> <tr> <td>5 GB</td> <td>48%</td> <td>107%</td> </tr> <tr> <td>10 GB</td> <td>64%</td> <td>92%</td> </tr> <tr> <td>20 GB</td> <td>96%</td> <td>88%</td> </tr> <tr> <td>50 GB</td> <td>154%</td> <td>57%</td> </tr> <tr> <td>0.5 GB short validity</td> <td>13%</td> <td>139%</td> </tr> <tr> <td>1 GB short validity</td> <td>14%</td> <td>148%</td> </tr> </tbody> </table>			Arab:OECD average			Residential	Business		0.5 GB	19%	140%	1 GB	19%	148%	2 GB	33%	143%	5 GB	48%	107%	10 GB	64%	92%	20 GB	96%	88%	50 GB	154%	57%	0.5 GB short validity	13%	139%	1 GB short validity	14%	148%
	Arab:OECD average																																										
	Residential	Business																																									
	0.5 GB	19%	140%																																								
	1 GB	19%	148%																																								
	2 GB	33%	143%																																								
	5 GB	48%	107%																																								
	10 GB	64%	92%																																								
20 GB	96%	88%																																									
50 GB	154%	57%																																									
0.5 GB short validity	13%	139%																																									
1 GB short validity	14%	148%																																									
1 GB	Egypt	Sudan	Tunisia	Lebanon	Bahrain	Jordan																																					
2 GB	Egypt	Sudan	Somalia	Lebanon	UAE	Yemen																																					
5 GB	Libya	Sudan	Tunisia	Yemen	UAE	Lebanon																																					
10 GB	Sudan	Tunisia	Mauritania	Yemen	UAE	Lebanon																																					
20 GB	Sudan	Mauritania	Tunisia	Yemen	UAE	Lebanon																																					
50 GB	Sudan	Mauritania	Djibouti	Yemen	Comoros	Lebanon																																					
0.5 GB short validity	Egypt	Sudan	Somalia	Jordan	Lebanon	Bahrain																																					
1 GB short validity	Egypt	Sudan	Somalia	Lebanon	Jordan	Bahrain																																					
Business	0.5 GB	Egypt	Tunisia	Sudan	Djibouti	Mauritania	Libya																																				
	1 GB	Egypt	Tunisia	Sudan	Djibouti	Mauritania	Libya																																				
	2 GB	Egypt	Sudan	Somalia	Djibouti	Mauritania	Libya																																				
	5 GB	Sudan	Tunisia	Egypt	Djibouti	Mauritania	Libya																																				
	10 GB	Sudan	Tunisia	Somalia	Djibouti	Mauritania	Libya																																				
	20 GB	Sudan	Tunisia	Oman	Djibouti	Mauritania	UAE																																				
	50 GB	Sudan	Oman	Tunisia	Djibouti	UAE	Lebanon																																				
	0.5 GB short validity	Egypt	Sudan	Somalia	Djibouti	Mauritania	Libya																																				
	1 GB short validity	Egypt	Somalia	Tunisia	Djibouti	Mauritania	Libya																																				

- Egypt, Sudan and Tunisia are most frequently the cheapest countries for both residential and business services. Yemen and Lebanon feature heavily in the three most expensive for residential services, while for business services, it is Djibouti and Mauritania.
- The average for the residential service baskets in the Arab countries compared to the OECD average ranges from 13% more expensive, for the 0.5 GB short validity basket, to 154% for the 50 GB basket.
- For business services, the range is 57% (more expensive) for the 50GB basket, to 148% for the 1 GB short validity basket.





MOBILE BROADBAND TIME SERIES ANALYSIS AND RANKING TABLES 2017-2021

2017 OECD MOBILE BROADBAND BASKETS RANKING 0.5GB DATA/MONTH, RESIDENTIAL



Results for Mobile Broadband: 0.5GB/30 days per mth, Residential basket, 2017-2021
Results in USD PPP including VAT, residential results

	2017	2018	2019	2020	2021
Algeria	13.53	13.53	12.21	-	24.42
Bahrain	32.29	32.29	32.32	32.78	32.78
Comoros	22.84	22.84	15.22	15.22	15.22
Djibouti	30.64	30.64	30.64	30.64	30.64
Egypt	3.94	3.94	3.94	2.26	2.26
Iraq	11.17	19.15	19.15	15.96	15.96
Jordan	7.90	7.90	7.90	7.90	31.62
Kuwait	26.48	26.48	37.07	31.77	27.36
Lebanon	25.47	28.28	28.28	28.28	28.28
Libya	17.67	17.67	10.13	10.13	6.33
Mauritania	257.74	257.74	257.74	25.77	8.59
Morocco	12.71	12.71	12.71	12.71	6.91
Oman	9.61	9.61	9.61	14.42	24.03
Palestine		28.72	11.05	11.05	6.35
Qatar	25.20	25.20	25.20	26.48	20.56
Saudi Arabia	12.39	13.01	12.39	35.61	21.37
Somalia	39.55	14.12	14.12	14.12	5.65
Sudan					3.35
Syria	8.74	8.74	8.75	8.75	8.75
Tunisia	10.72	10.72	9.26	4.82	4.82
UAE	30.49	23.20	25.52	23.20	23.20
Yemen	24.75	24.75	22.00	14.51	14.51

Arab average	31.19	30.06	28.82	18.32	16.50
--------------	-------	-------	-------	-------	-------

Below Arab average
Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	9	8	8	1	16
Bahrain	17	19	18	19	21
Comoros	11	12	12	11	10
Djibouti	16	18	17	17	19
Egypt	1	1	1	2	1
Iraq	6	11	13	12	11
Jordan	2	2	2	4	20
Kuwait	14	15	19	18	17
Lebanon	13	16	16	16	18
Libya	10	10	6	6	5
Mauritania	19	20	20	14	8
Morocco	8	6	10	8	7
Oman	4	4	5	10	15
Palestine		17	7	7	6
Qatar	12	14	14	15	12
Saudi Arabia	7	7	9	20	13
Somalia	18	9	11	9	4
Sudan					2
Syria	3	3	3	5	9
Tunisia	5	5	4	3	3
UAE	15	13	15	13	14

Least expensive
Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 1GB DATA/MONTH, RESIDENTIAL



Results for Mobile Broadband: 1GB/30 days per mth, Residential basket, 2017-2021
Results in USD PPP including VAT, residential results

	2017	2018	2019	2020	2021
Algeria	18.32	18.32	12.21	-	24.42
Bahrain	32.29	32.29	32.32	32.78	32.78
Comoros	27.19	27.19	15.22	15.22	15.22
Djibouti	30.64	30.64	30.64	30.64	30.64
Egypt	7.32	7.32	7.02	2.26	2.26
Iraq	23.94	23.94	23.94	15.96	15.96
Jordan	19.76	19.76	7.90	19.76	31.62
Kuwait	26.48	26.48	37.07	31.77	27.36
Lebanon	43.06	47.80	47.80	48.73	47.80
Libya	17.67	17.67	10.13	10.13	6.33
Mauritania	257.74	257.74	257.74	25.77	8.59
Morocco	12.71	12.71	12.71	12.71	6.91
Oman	14.42	14.42	14.42	14.42	24.03
Palestine		36.08	13.99	14.73	6.35
Qatar	25.20	25.20	25.20	26.48	24.07
Saudi Arabia	24.77	26.01	18.58	35.61	21.37
Somalia	70.62	14.12	14.12	14.12	5.65
Sudan					3.99
Syria	8.74	8.74	8.75	8.75	8.75
Tunisia	10.72	10.72	9.26	4.82	4.82
UAE	39.33	45.94	45.94	23.20	23.20
Yemen	28.92	28.92	23.15	24.11	24.11

Arab average	36.99	34.86	31.81	20.60	18.01
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	7	8	6	1	16
Bahrain	15	16	16	18	20
Comoros	13	14	11	10	10
Djibouti	14	15	15	16	18
Egypt	1	1	1	2	1
Iraq	9	10	13	11	11
Jordan	8	9	2	12	19
Kuwait	12	13	17	17	17
Lebanon	17	19	19	20	21
Libya	6	7	5	5	5
Mauritania	19	20	20	14	8
Morocco	4	4	7	6	7
Oman	5	6	10	8	14
Palestine		17	8	9	6
Qatar	11	11	14	15	15
Saudi Arabia	10	12	12	19	12
Somalia	18	5	9	7	4
Sudan					2
Syria	2	2	3	4	9
Tunisia	3	3	4	3	3
UAE	16	18	18	13	13

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 2GB DATA/MONTH, RESIDENTIAL



Results for Mobile Broadband: 2GB/30 days per mth, Residential basket, 2017-2021
Results in USD PPP including VAT, residential results

	2017	2018	2019	2020	2021
Algeria	26.05	29.31	24.42	-	24.42
Bahrain	32.29	32.29	32.32	32.78	32.78
Comoros	38.06	38.06	26.64	26.64	26.64
Djibouti	30.64	30.64	30.64	30.64	30.64
Egypt	10.71	10.71	10.71	4.52	4.52
Iraq	29.62	23.94	23.94	15.96	15.96
Jordan	19.76	19.76	15.81	19.76	31.62
Kuwait	26.48	26.48	37.07	31.77	27.36
Lebanon	58.14	64.53	64.53	65.46	64.53
Libya	27.17	27.17	10.13	10.13	6.33
Mauritania	257.74	257.74	257.74	25.77	8.59
Morocco	12.71	12.71	12.71	12.71	6.91
Oman	24.03	24.03	24.03	14.42	24.03
Palestine		72.17	13.99	15.87	12.70
Qatar	25.20	25.20	25.20	26.48	24.07
Saudi Arabia	27.87	27.87	30.97	35.61	35.61
Somalia	98.87	14.12	14.12	14.12	5.65
Sudan					4.62
Syria	13.02	13.02	13.03	13.03	13.03
Tunisia	10.72	10.72	10.72	8.57	8.57
UAE	43.75	45.94	45.94	41.76	41.76
Yemen	33.72	33.72	33.72	38.47	38.47

Arab average	42.33	40.01	36.11	24.22	22.22
--------------	-------	-------	-------	-------	-------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	8	13	11	1	13
Bahrain	14	15	16	17	18
Comoros	15	16	13	14	14
Djibouti	13	14	14	15	16
Egypt	1	1	2	2	1
Iraq	12	7	9	10	10
Jordan	5	6	8	11	17
Kuwait	9	10	17	16	15
Lebanon	17	18	19	20	21
Libya	10	11	1	4	4
Mauritania	19	20	20	12	7
Morocco	3	3	4	5	5
Oman	6	8	10	8	11
Palestine		19	6	9	8
Qatar	7	9	12	13	12
Saudi Arabia	11	12	15	18	19
Somalia	18	5	7	7	3
Sudan					2
Syria	4	4	5	6	9
Tunisia	2	2	3	3	6
UAE	16	17	18	19	20

Least expensive
 Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 5GB DATA/MONTH, RESIDENTIAL



Results for Mobile Broadband: 5GB/30 days per mth, Residential basket, 2017-2021
Results in USD PPP including VAT, residential results

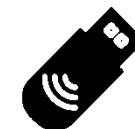
	2017	2018	2019	2020	2021
Algeria	30.53	30.53	24.42	24.42	24.42
Bahrain	32.29	32.29	32.32	32.78	27.50
Comoros	61.17	61.17	54.37	54.37	54.37
Djibouti	30.64	30.64	30.64	30.64	30.64
Egypt	19.97	18.81	18.18	11.29	11.29
Iraq	29.62	23.94	23.94	23.94	15.96
Jordan	23.71	23.71	23.71	27.66	31.62
Kuwait	26.48	26.48	37.07	31.77	27.36
Lebanon	58.14	64.53	64.53	65.46	64.53
Libya	55.65	55.65	11.39	11.39	6.33
Mauritania	429.56	429.56	429.56	42.96	8.59
Morocco	12.71	12.71	12.71	12.71	12.97
Oman	48.05	48.05	48.05	24.03	24.03
Palestine		180.42	22.09	25.39	25.04
Qatar	43.33	43.33	43.33	48.15	48.15
Saudi Arabia	40.25	40.25	46.45	35.61	56.98
Somalia	197.74	28.25	14.12	14.12	14.12
Sudan					6.57
Syria	21.44	21.44	21.44	21.44	23.17
Tunisia	16.08	16.08	16.08	8.57	8.57
UAE	52.80	55.44	83.05	69.60	69.60
Yemen	67.35	67.35	67.35	75.08	75.08
Arab average	64.88	62.41	53.56	32.92	30.31

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	8	9	10	9	11
Bahrain	10	11	12	14	14
Comoros	17	17	17	18	18
Djibouti	9	10	11	12	15
Egypt	3	3	5	2	5
Iraq	7	6	9	7	8
Jordan	5	5	8	11	16
Kuwait	6	7	13	13	13
Lebanon	16	18	18	19	20
Libya	15	16	1	3	1
Mauritania	19	20	20	16	4
Morocco	1	1	2	4	6
Oman	13	14	16	8	10
Palestine		19	7	10	12
Qatar	12	13	14	17	17
Saudi Arabia	11	12	15	15	19
Somalia	18	8	3	5	7
Sudan					2
Syria	4	4	6	6	9
Tunisia	2	2	4	1	3
UAE	14	15	19	20	21

Least expensive
 Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 10GB DATA/MONTH, RESIDENTIAL



Results for Mobile Broadband: 10GB/30 days per mth, Residential basket, 2017-2021
Results in USD PPP including VAT, residential results

	2017	2018	2019	2020	2021
Algeria	64.44	70.01	24.42	24.42	24.42
Bahrain	32.29	32.29	32.32	32.78	32.78
Comoros	122.34	122.34	54.37	54.37	54.37
Djibouti	30.64	30.64	30.64	30.64	30.64
Egypt	34.42	29.90	29.90	15.80	15.80
Iraq	41.11	33.52	33.52	39.91	23.94
Jordan	23.71	23.71	23.71	27.66	31.62
Kuwait	42.36	26.48	37.07	31.77	27.36
Lebanon	98.34	109.16	84.06	84.06	82.66
Libya	103.13	103.13	18.99	15.83	12.66
Mauritania	859.12	859.12	859.12	85.91	8.59
Morocco	25.69	25.69	25.69	25.69	25.69
Oman	96.10	96.10	72.08	48.05	48.05
Palestine		360.84	25.77	28.57	28.57
Qatar	52.96	52.96	52.96	48.82	51.68
Saudi Arabia	61.93	48.77	58.83	70.51	70.51
Somalia	395.48	56.50	28.25	14.12	14.12
Sudan					6.57
Syria	34.91	34.91	34.91	34.91	43.47
Tunisia	26.79	26.79	26.79	8.57	8.57
UAE	75.42	79.19	83.05	83.05	83.05
Yemen	134.62	134.62	100.99	111.68	111.68

Arab average	117.79	112.22	82.74	43.67	38.04
--------------	--------	--------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	12	13	3	5	8
Bahrain	5	7	10	11	14
Comoros	17	18	15	16	18
Djibouti	4	6	9	9	12
Egypt	6	5	8	3	6
Iraq	8	8	11	13	7
Jordan	1	1	2	7	13
Kuwait	9	3	13	10	10
Lebanon	15	17	19	19	20
Libya	16	16	1	4	4
Mauritania	19	20	20	20	3
Morocco	2	2	4	6	9
Oman	14	15	17	14	16
Palestine		19	5	8	11
Qatar	10	11	14	15	17
Saudi Arabia	11	10	16	17	19
Somalia	18	12	7	2	5
Sudan					1
Syria	7	9	12	12	15
Tunisia	3	4	6	1	2
UAE	13	14	18	18	21

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 20GB DATA/MONTH, RESIDENTIAL



Results for Mobile Broadband: 20GB/30 days per mth, Residential basket, 2017-2021
Results in USD PPP including VAT, residential results

	2017	2018	2019	2020	2021
Algeria	101.07	170.95	32.56	48.84	36.63
Bahrain	52.84	52.84	53.45	53.91	42.27
Comoros	244.68	244.68	81.56	81.56	81.56
Djibouti	30.64	30.64	30.64	30.64	30.64
Egypt	56.99	56.99	56.99	27.09	27.09
Iraq	48.77	47.89	47.89	39.99	39.91
Jordan	27.83	23.71	23.71	27.66	31.62
Kuwait	42.36	26.48	37.07	31.77	37.07
Lebanon	148.59	164.94	125.89	84.06	109.16
Libya	198.08	198.08	25.32	22.16	22.16
Mauritania	881.79	881.79	881.79	171.82	8.59
Morocco	38.66	38.66	38.66	38.66	41.26
Oman	144.15	144.15	120.13	96.10	96.10
Palestine		721.68	34.61	38.09	38.09
Qatar	96.30	96.30	96.30	51.30	77.52
Saudi Arabia	82.57	97.54	64.38	70.51	70.51
Somalia	692.09	84.75	42.37	28.25	28.25
Sudan					6.57
Syria	57.90	57.90	57.90	57.90	58.05
Tunisia	26.79	26.79	26.79	17.15	17.15
UAE	120.67	126.71	175.85	175.85	139.20
Yemen	269.14	269.14	184.90	184.90	184.90

Arab average	168.10	169.65	106.61	65.63	55.65
--------------	--------	--------	--------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	12	16	5	11	9
Bahrain	7	7	11	13	14
Comoros	17	18	15	16	18
Djibouti	3	4	4	6	7
Egypt	8	8	12	3	5
Iraq	6	6	10	10	12
Jordan	2	1	1	4	8
Kuwait	5	2	7	7	10
Lebanon	15	15	18	17	20
Libya	16	17	2	2	4
Mauritania	19	20	20	19	2
Morocco	4	5	8	9	13
Oman	14	14	17	18	19
Palestine		19	6	8	11
Qatar	11	11	16	12	17
Saudi Arabia	10	12	14	15	16
Somalia	18	10	9	5	6
Sudan					1
Syria	9	9	13	14	15
Tunisia	1	3	3	1	3
UAE	13	13	19	20	21

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 50GB DATA/MONTH, RESIDENTIAL



Results for Mobile Broadband: 50GB/30 days per mth, Residential basket, 2017-2021
Results in USD PPP including VAT, residential results

	2017	2018	2019	2020	2021
Algeria	232.34	427.58	73.27	73.27	61.05
Bahrain	52.84	52.84	59.06	58.25	42.27
Comoros	611.70	611.70	217.49	217.49	217.49
Djibouti	30.64	30.64	30.64	30.64	30.64
Egypt	147.30	147.30	147.30	79.02	79.02
Iraq	48.77	47.89	47.89	39.99	55.87
Jordan	39.52	39.52	39.52	31.62	31.62
Kuwait	42.36	31.77	52.95	31.77	37.07
Lebanon	299.34	332.27	279.28	153.78	192.82
Libya	482.94	482.94	53.89	53.89	31.65
Mauritania	881.79	881.79	881.79	386.60	25.77
Morocco	91.89	91.89	90.81	79.74	82.97
Oman	240.25	240.25	240.25	192.20	192.20
Palestine		1,804.19	50.81	88.88	53.96
Qatar	239.72	239.72	239.72	51.46	120.37
Saudi Arabia	123.24	97.54	64.38	70.51	70.51
Somalia	1,680.79	176.55	56.50	42.37	42.37
Sudan					6.57
Syria	57.90	57.90	57.90	57.90	75.30
Tunisia	155.40	214.35	53.59	42.87	42.87
UAE	167.48	175.85	175.85	175.85	175.85
Yemen	605.46	605.46	477.74	477.74	477.74

Arab average	311.58	323.33	161.46	115.99	97.55
--------------	--------	--------	--------	--------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	12	16	12	12	12
Bahrain	5	5	10	10	7
Comoros	17	18	16	19	21
Djibouti	1	1	1	1	3
Egypt	9	9	14	13	15
Iraq	4	4	3	4	11
Jordan	2	3	2	2	4
Kuwait	3	2	5	3	6
Lebanon	15	15	19	16	20
Libya	16	17	7	8	5
Mauritania	18	19	20	20	2
Morocco	7	7	13	14	16
Oman	14	14	18	18	19
Palestine		20	4	15	10
Qatar	13	13	17	7	17
Saudi Arabia	8	8	11	11	13
Somalia	19	11	8	5	8
Sudan					1
Syria	6	6	9	9	14
Tunisia	10	12	6	6	9
UAE	11	10	15	17	18

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 0.5GB DATA/15 DAYS SHORT VALIDITY, RESIDENTIAL



Results for Mobile Broadband: 0.5GB/15 days per mth, Residential basket, 2017-2021
Results in USD PPP including VAT, residential results

	2017	2018	2019	2020	2021
Algeria	10.99	10.99	10.99	-	24.42
Bahrain	27.00	27.00	27.03	27.50	27.50
Comoros	20.39	20.39	7.61	7.61	7.61
Djibouti	16.38	16.38	16.38	16.38	16.38
Egypt	3.94	3.94	3.94	2.26	2.26
Iraq	11.17	19.15	19.15	15.96	15.96
Jordan	7.90	7.90	7.90	7.90	31.62
Kuwait	26.48	26.48	37.07	31.77	27.36
Lebanon	25.47	28.28	28.28	28.28	28.28
Libya	17.67	17.67	5.06	5.06	5.06
Mauritania	128.87	128.87	128.87	12.89	8.59
Morocco	12.71	12.71	12.71	7.78	4.32
Oman	9.61	9.61	9.61	14.42	14.42
Palestine		28.72	11.05	11.05	6.35
Qatar	25.20	25.20	25.20	24.07	19.26
Saudi Arabia	12.39	13.01	12.39	35.61	21.37
Somalia	39.55	8.47	8.47	8.47	4.24
Sudan					3.35
Syria	8.74	8.74	8.75	8.75	8.75
Tunisia	10.72	10.72	9.26	4.82	4.82
UAE	30.49	23.20	25.52	23.20	23.20
Yemen	24.75	24.75	22.00	14.51	14.51

Arab average	23.52	22.48	20.82	15.41	14.53
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	6	7	9	1	17
Bahrain	16	17	17	17	19
Comoros	12	13	3	5	8
Djibouti	10	10	13	14	13
Egypt	1	1	1	2	1
Iraq	7	12	14	13	12
Jordan	2	2	4	7	21
Kuwait	15	16	19	19	18
Lebanon	14	18	18	18	20
Libya	11	11	2	4	6
Mauritania	19	20	20	11	9
Morocco	9	8	12	6	4
Oman	4	5	8	12	11
Palestine		19	10	10	7
Qatar	13	15	15	16	14
Saudi Arabia	8	9	11	20	15
Somalia	18	3	5	8	3
Sudan					2
Syria	3	4	6	9	10
Tunisia	5	6	7	3	5
UAE	17	14	16	15	16

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 1GB DATA/15 DAYS SHORT VALIDITY, RESIDENTIAL



Results for Mobile Broadband: 1GB/15 days per mth, Residential basket, 2017-2021
Results in USD PPP including VAT, residential results

	2017	2018	2019	2020	2021
Algeria	14.65	14.65	12.21	-	24.42
Bahrain	27.00	27.00	27.03	27.50	27.50
Comoros	27.19	27.19	13.32	13.32	13.32
Djibouti	16.38	16.38	16.38	16.38	16.38
Egypt	7.32	7.32	7.02	2.26	2.26
Iraq	23.94	22.35	22.35	15.96	15.96
Jordan	17.78	17.78	7.90	17.78	31.62
Kuwait	26.48	26.48	37.07	31.77	27.36
Lebanon	43.06	47.80	47.80	48.73	47.80
Libya	17.67	17.67	5.06	5.06	5.06
Mauritania	128.87	128.87	128.87	12.89	8.59
Morocco	12.71	12.71	12.71	7.78	4.32
Oman	14.42	14.42	14.42	14.42	14.42
Palestine		36.08	13.99	14.73	6.35
Qatar	25.20	25.20	25.20	24.07	19.26
Saudi Arabia	24.77	26.01	18.58	35.61	21.37
Somalia	70.62	8.47	8.47	8.47	4.24
Sudan					3.99
Syria	8.74	8.74	8.75	8.75	8.75
Tunisia	10.72	10.72	9.26	4.82	4.82
UAE	39.33	45.94	45.94	23.20	23.20
Yemen	28.92	28.92	23.15	24.11	24.11

Arab average	29.29	27.18	24.07	17.88	16.14
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	6	7	7	1	17
Bahrain	14	15	16	17	19
Comoros	15	16	9	9	10
Djibouti	7	8	12	13	13
Egypt	1	1	2	2	1
Iraq	10	11	14	12	12
Jordan	9	10	3	14	20
Kuwait	13	14	17	18	18
Lebanon	17	19	19	20	21
Libya	8	9	1	4	6
Mauritania	19	20	20	8	8
Morocco	4	5	8	5	4
Oman	5	6	11	10	11
Palestine		17	10	11	7
Qatar	12	12	15	16	14
Saudi Arabia	11	13	13	19	15
Somalia	18	2	4	6	3
Sudan					2
Syria	2	3	5	7	9
Tunisia	3	4	6	3	5
UAE	16	18	18	15	16

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 0.5GB DATA/MONTH, BUSINESS



Results for Mobile Broadband: 0.5GB/30 days per mth, Business basket, 2017-2021
Results in USD PPP excluding VAT, residential results

	2017	2018	2019	2020	2021
Algeria	11.57	11.37	10.26	10.26	10.26
Bahrain	33.02	33.02	31.45	31.45	63.40
Comoros					
Djibouti	145.29	302.60	158.50	158.50	158.50
Egypt	3.45	3.45	3.45	2.97	2.97
Iraq	11.17	19.15	19.15	15.96	15.96
Jordan				54.51	54.51
Kuwait	127.09	21.18	21.18	21.18	52.95
Lebanon	21.71	20.38	25.47	21.71	21.71
Libya	33.59	33.59	74.20	74.20	74.20
Mauritania	666.56	666.56	666.56	22.22	111.09
Morocco	13.65	13.65	12.76	12.76	12.76
Oman	14.42	14.42	22.88	13.73	14.42
Palestine				8.25	
Qatar	43.33	43.33	43.33	43.33	22.34
Saudi Arabia	30.35	30.35	30.35	30.35	30.35
Somalia	35.95	12.84	12.84	12.84	5.14
Sudan					4.86
Syria	14.45	14.45	14.45	14.45	14.45
Tunisia	18.92	18.92	22.52	4.05	4.05
UAE	78.01	78.01	78.01	12.82	12.82
Yemen	23.88	23.88	20.95		

Arab average	73.69	75.62	70.46	29.77	36.14
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	3	2	2	4	5
Bahrain	10	12	12	15	16
Comoros	-	-	-	-	-
Djibouti	16	16	16	19	19
Egypt	1	1	1	1	1
Iraq	2	8	6	10	10
Jordan	-	-	-	17	15
Kuwait	15	10	7	11	14
Lebanon	8	9	10	12	11
Libya	11	13	14	18	17
Mauritania	17	17	17	13	18
Morocco	4	4	3	5	6
Oman	5	5	9	8	8
Palestine	-	-	-	3	-
Qatar	13	14	13	16	12
Saudi Arabia	9	11	11	14	13
Somalia	12	3	4	7	4
Sudan					3
Syria	6	6	5	9	9
Tunisia	7	7	8	2	2
UAE	14	15	15	6	7

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 1GB DATA/MONTH, BUSINESS



Results for Mobile Broadband: 1GB/30 days per mth, Business basket, 2017-2021
Results in USD PPP excluding VAT, residential results

	2017	2018	2019	2020	2021
Algeria	16.70	16.42	10.26	10.26	10.26
Bahrain	33.02	33.02	31.45	31.45	63.40
Comoros					
Djibouti	145.29	302.60	158.50	158.50	158.50
Egypt	6.43	6.43	6.05	2.97	2.97
Iraq	23.94	23.94	23.94	15.96	15.96
Jordan				54.51	54.51
Kuwait	127.09	21.18	21.18	21.18	52.95
Lebanon	36.66	36.66	43.06	36.66	36.66
Libya	33.59	33.59	74.20	74.20	74.20
Mauritania	666.56	666.56	666.56	22.22	111.09
Morocco	13.65	13.65	12.76	12.76	12.76
Oman	24.03	24.03	22.88	13.73	14.42
Palestine				11.43	
Qatar	43.33	43.33	43.33	43.33	22.34
Saudi Arabia	30.35	30.35	30.35	30.35	30.35
Somalia	64.20	12.84	12.84	12.84	5.14
Sudan					4.86
Syria	14.45	14.45	14.45	14.45	14.45
Tunisia	18.92	18.92	22.52	4.05	4.05
UAE	78.01	78.01	78.01	30.49	30.49
Yemen	27.54	27.54	22.05		

Arab average	77.99	77.97	71.91	31.65	37.86
--------------	-------	-------	-------	-------	-------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	4	5	2	3	5
Bahrain	9	11	11	14	16
Comoros	-	-	-	-	-
Djibouti	16	16	16	19	19
Egypt	1	1	1	1	1
Iraq	6	8	9	9	9
Jordan	-	-	-	17	15
Kuwait	15	7	6	10	14
Lebanon	11	13	12	15	13
Libya	10	12	14	18	17
Mauritania	17	17	17	11	18
Morocco	2	3	3	5	6
Oman	7	9	8	7	7
Palestine	-	-	-	4	-
Qatar	12	14	13	16	10
Saudi Arabia	8	10	10	12	11
Somalia	13	2	4	6	4
Sudan					3
Syria	3	4	5	8	8
Tunisia	5	6	7	2	2
UAE	14	15	15	13	12

Least expensive
 Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 2GB DATA/MONTH, BUSINESS



Results for Mobile Broadband: 2GB/30 days per mth, Business basket, 2017-2021
Results in USD PPP excluding VAT, residential results

	2017	2018	2019	2020	2021
Algeria	26.18	22.82	20.52	10.26	10.26
Bahrain	33.02	33.02	31.45	31.45	63.40
Comoros					
Djibouti	145.29	302.60	158.50	158.50	158.50
Egypt	9.40	9.40	9.09	3.96	4.75
Iraq	29.62	23.94	23.94	15.96	15.96
Jordan				54.51	54.51
Kuwait	127.09	21.18	21.18	21.18	52.95
Lebanon	83.64	49.47	58.14	49.47	49.47
Libya	33.59	33.59	74.20	74.20	74.20
Mauritania	666.56	666.56	666.56	22.22	111.09
Morocco	13.65	13.65	12.76	12.76	12.76
Oman	48.05	48.05	45.76	22.88	22.88
Palestine				16.51	
Qatar	43.33	43.33	43.33	43.33	22.34
Saudi Arabia	30.35	30.35	30.35	30.35	30.35
Somalia	89.88	12.84	12.84	12.84	5.14
Sudan					4.86
Syria	14.45	14.45	14.45	14.45	14.45
Tunisia	18.92	18.92	22.52	7.20	7.20
UAE	78.01	78.01	78.01	33.82	33.82
Yemen	32.12	32.12	32.12		

Arab average	84.62	80.79	75.32	33.47	39.42
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	5	7	5	3	5
Bahrain	8	10	10	13	16
Comoros	-	-	-	-	-
Djibouti	16	16	16	19	19
Egypt	1	1	1	1	1
Iraq	6	8	8	7	8
Jordan	-	-	-	17	15
Kuwait	15	6	6	9	14
Lebanon	13	14	13	16	13
Libya	9	11	14	18	17
Mauritania	17	17	17	10	18
Morocco	2	3	2	4	6
Oman	11	13	12	11	10
Palestine	-	-	-	8	-
Qatar	10	12	11	15	9
Saudi Arabia	7	9	9	12	11
Somalia	14	2	3	5	3
Sudan					2
Syria	3	4	4	6	7
Tunisia	4	5	7	2	4
UAE	12	15	15	14	12

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 5GB DATA/MONTH, BUSINESS



Results for Mobile Broadband: 5GB/30 days per mth, Business basket, 2017-2021
Results in USD PPP excluding VAT, residential results

	2017	2018	2019	2020	2021
Algeria	36.53	35.91	20.52	10.26	10.26
Bahrain	36.98	36.98	56.25	57.79	63.40
Comoros					
Djibouti	145.29	302.60	158.50	158.50	158.50
Egypt	19.47	19.47	18.21	6.14	9.11
Iraq	29.62	23.94	23.94	23.94	15.96
Jordan				54.51	54.51
Kuwait	127.09	21.18	21.18	21.18	52.95
Lebanon	83.64	49.47	58.14	49.47	49.47
Libya	130.82	130.82	74.20	74.20	74.20
Mauritania	755.43	755.43	755.43	37.03	111.09
Morocco	13.65	13.65	12.76	12.76	12.76
Oman	81.69	81.69	59.49	45.76	22.88
Palestine				49.52	
Qatar	43.33	43.33	43.33	43.33	22.34
Saudi Arabia	43.35	40.25	40.25	43.35	30.97
Somalia	179.76	25.68	12.84	12.84	12.84
Sudan					4.86
Syria	23.17	23.17	17.47	17.47	17.47
Tunisia	18.92	18.92	22.52	7.20	7.20
UAE	100.10	100.10	98.78	52.59	52.59
Yemen	64.15	64.15	64.15		

Arab average	107.39	99.26	86.55	40.94	41.23
--------------	--------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	6	8	5	3	4
Bahrain	7	9	11	17	16
Comoros	-	-	-	-	-
Djibouti	15	16	16	19	19
Egypt	3	3	4	1	3
Iraq	5	6	8	8	7
Jordan	-	-	-	16	15
Kuwait	13	4	6	7	14
Lebanon	11	12	12	13	12
Libya	14	15	14	18	17
Mauritania	17	17	17	9	18
Morocco	1	1	1	4	5
Oman	10	13	13	12	10
Palestine	-	-	-	14	-
Qatar	8	11	10	10	9
Saudi Arabia	9	10	9	11	11
Somalia	16	7	2	5	6
Sudan					1
Syria	4	5	3	6	8
Tunisia	2	2	7	2	2
UAE	12	14	15	15	13

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 10GB DATA/MONTH, BUSINESS



RANKING TABLES

Results for Mobile Broadband: 10GB/30 days per mth, Business basket, 2017-2021
Results in USD PPP excluding VAT, residential results

	2017	2018	2019	2020	2021
Algeria	52.18	51.31	20.52	20.52	20.52
Bahrain	36.98	36.98	56.25	57.79	63.40
Comoros					
Djibouti	145.29	302.60	158.50	158.50	158.50
Egypt	30.19	30.19	30.19	15.05	15.05
Iraq	41.11	33.52	33.52	39.91	23.94
Jordan				54.51	54.51
Kuwait	127.09	21.18	21.18	21.18	52.95
Lebanon	83.64	78.67	75.73	64.42	64.42
Libya	292.87	292.87	74.20	74.20	74.20
Mauritania	760.16	760.16	888.74	74.06	111.09
Morocco	21.41	21.41	21.41	21.41	21.41
Oman	115.32	115.32	109.83	68.64	22.88
Palestine				82.53	
Qatar	52.96	52.96	52.96	48.82	44.00
Saudi Arabia	49.54	49.54	49.54	61.31	61.31
Somalia	359.53	51.36	25.68	12.84	12.84
Sudan					4.86
Syria	28.88	28.88	23.17	23.17	23.17
Tunisia	18.92	18.92	22.52	7.20	7.20
UAE	100.10	100.10	98.78	71.38	71.38
Yemen	128.21	128.21	96.18		

Arab average	135.80	120.79	103.27	51.44	47.77
--------------	--------	--------	--------	-------	-------

Below Arab average
 Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	8	9	1	4	5
Bahrain	5	7	11	11	14
Comoros	-	-	-	-	-
Djibouti	14	16	16	19	19
Egypt	4	5	7	3	4
Iraq	6	6	8	8	9
Jordan	-	-	-	10	12
Kuwait	13	2	2	5	11
Lebanon	10	12	13	13	15
Libya	15	15	12	17	17
Mauritania	17	17	17	16	18
Morocco	2	3	3	6	6
Oman	12	14	15	14	7
Palestine		-	-	18	-
Qatar	9	11	10	9	10
Saudi Arabia	7	8	9	12	13
Somalia	16	10	6	2	3
Sudan					1
Syria	3	4	5	7	8
Tunisia	1	1	4	1	2
UAE	11	13	14	15	16

Least expensive
 Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 20GB DATA/MONTH, BUSINESS



Results for Mobile Broadband: 20GB/30 days per mth, Business basket, 2017-2021
Results in USD PPP excluding VAT, residential results

	2017	2018	2019	2020	2021
Algeria	73.06	71.83	29.93	24.63	24.63
Bahrain	36.98	36.98	56.25	57.79	63.40
Comoros					
Djibouti	145.29	302.60	158.50	158.50	158.50
Egypt	49.17	49.17	48.62	29.71	29.71
Iraq	48.77	47.89	47.89	47.89	39.91
Jordan				54.51	54.51
Kuwait	127.09	21.18	21.18	21.18	52.95
Lebanon	126.35	118.87	75.73	75.73	75.73
Libya	616.98	616.98	74.20	74.20	74.20
Mauritania	760.16	760.16	888.74	148.12	111.09
Morocco	25.95	25.95	25.95	25.95	25.95
Oman	235.45	235.45	224.23	114.41	22.88
Palestine				165.06	
Qatar	108.33	108.33	96.97	72.22	72.22
Saudi Arabia	49.54	49.54	49.54	61.93	61.93
Somalia	629.17	77.04	38.52	25.68	25.68
Sudan					4.86
Syria	40.61	40.61	40.61	40.61	40.61
Tunisia	22.71	22.71	22.52	14.41	14.41
UAE	177.43	177.43	177.43	110.03	110.03
Yemen	256.33	256.33	192.27		

Arab average	196.08	167.73	126.06	69.61	55.96
--------------	--------	--------	--------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	8	9	4	3	4
Bahrain	3	4	10	10	13
Comoros	-	-	-	-	-
Djibouti	12	15	14	18	19
Egypt	6	7	8	6	7
Iraq	5	6	7	8	8
Jordan	-	-	-	9	11
Kuwait	11	1	1	2	10
Lebanon	10	12	12	14	16
Libya	15	16	11	13	15
Mauritania	17	17	17	17	18
Morocco	2	3	3	5	6
Oman	14	14	16	16	3
Palestine	-	-	-	19	-
Qatar	9	11	13	12	14
Saudi Arabia	7	8	9	11	12
Somalia	16	10	5	4	5
Sudan					1
Syria	4	5	6	7	9
Tunisia	1	2	2	1	2
UAE	13	13	15	15	17

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 50GB DATA/MONTH, BUSINESS



Results for Mobile Broadband: 50GB/30 days per mth, Business basket, 2017-2021
Results in USD PPP excluding VAT, residential results

	2017	2018	2019	2020	2021
Algeria	135.68	133.40	61.57	51.31	51.31
Bahrain	36.98	36.98	56.25	83.22	63.40
Comoros					
Djibouti	145.29	302.60	158.50	158.50	158.50
Egypt	168.00	168.00	139.88	29.71	49.51
Iraq	48.77	47.89	47.89	47.89	79.81
Jordan				54.51	54.51
Kuwait	127.09	21.18	21.18	21.18	52.95
Lebanon	254.49	239.48	138.54	138.54	138.54
Libya	1,589.30	1,589.30	105.86	105.86	105.86
Mauritania	760.16	760.16	888.74	370.31	111.09
Morocco	76.57	76.57	75.68	66.45	69.14
Oman	379.60	379.60	361.52	297.45	22.88
Palestine				412.64	
Qatar	197.08	197.08	120.37	132.41	132.41
Saudi Arabia	61.93	61.93	61.93	74.32	61.93
Somalia	1,527.99	160.50	51.36	38.52	38.52
Sudan					4.86
Syria	954.91	954.91	52.34	52.34	52.34
Tunisia			135.09	36.02	36.02
UAE	310.00	310.00	310.00	155.34	155.34
Yemen	576.62	576.62	480.53		
Arab average	432.38	353.89	181.51	122.45	75.73

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	6	6	6	6	6
Bahrain	1	2	5	11	11
Comoros	-	-	-	-	-
Djibouti	7	11	14	16	19
Egypt	8	8	13	2	5
Iraq	2	3	2	5	13
Jordan	-	-	-	8	9
Kuwait	5	1	1	1	8
Lebanon	10	10	12	14	17
Libya	16	16	9	12	14
Mauritania	13	14	17	18	15
Morocco	4	5	8	9	12
Oman	12	13	16	17	2
Palestine	-	-	-	19	-
Qatar	9	9	10	13	16
Saudi Arabia	3	4	7	10	10
Somalia	15	7	3	4	4
Sudan					1
Syria	14	15	4	7	7
Tunisia	-	-	11	3	3
UAE	11	12	15	15	18

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 0.5GB DATA/15 DAYS SHORT VALIDITY, BUSINESS



Results for Mobile Broadband: 0.5GB/15 days per mth, Business basket, 2017-2021
Results in USD PPP excluding VAT, residential results

	2017	2018	2019	2020	2021
Algeria	11.57	11.37	10.26	10.26	10.26
Bahrain	33.02	33.02	31.45	31.45	63.40
Comoros					
Djibouti	145.29	302.60	158.50	158.50	158.50
Egypt	3.45	3.45	3.45	2.97	2.97
Iraq	11.17	19.15	19.15	15.96	15.96
Jordan				54.51	54.51
Kuwait	127.09	21.18	21.18	21.18	52.95
Lebanon	21.71	20.38	25.47	21.71	21.71
Libya	33.59	33.59	74.20	74.20	74.20
Mauritania	333.28	333.28	333.28	11.11	111.09
Morocco	13.65	13.65	12.76	12.76	12.76
Oman	14.42	14.42	22.88	13.73	14.42
Palestine				8.25	
Qatar	43.33	43.33	43.33	24.07	22.34
Saudi Arabia	30.35	30.35	30.35	30.35	30.35
Somalia	35.95	7.70	7.70	7.70	3.85
Sudan					3.79
Syria	14.45	14.45	14.45	14.45	14.45
Tunisia	18.92	18.92	22.52	4.05	4.05
UAE	78.01	78.01	78.01	12.82	12.82
Yemen	23.88	23.88	20.95		

Arab average	55.17	56.82	51.66	27.90	36.02
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	3	3	3	5	5
Bahrain	10	12	12	16	16
Comoros	-	-	-	-	-
Djibouti	16	16	16	19	19
Egypt	1	1	1	1	1
Iraq	2	8	6	11	10
Jordan	-	-	-	17	15
Kuwait	15	10	7	12	14
Lebanon	8	9	10	13	11
Libya	11	13	14	18	17
Mauritania	17	17	17	6	18
Morocco	4	4	4	7	6
Oman	5	5	9	9	8
Palestine	-	-	-	4	-
Qatar	13	14	13	14	12
Saudi Arabia	9	11	11	15	13
Somalia	12	2	2	3	3
Sudan					2
Syria	6	6	5	10	9
Tunisia	7	7	8	2	4
UAE	14	15	15	8	7

■ Least expensive
■ Most expensive



2017 OECD MOBILE BROADBAND BASKETS RANKING 1GB DATA/15 DAYS SHORT VALIDITY, BUSINESS



Results for Mobile Broadband: 1GB/15 days per mth, Business basket, 2017-2021
Results in USD PPP excluding VAT, residential results

	2017	2018	2019	2020	2021
Algeria	16.70	16.42	10.26	10.26	10.26
Bahrain	33.02	33.02	31.45	31.45	63.40
Comoros					
Djibouti	145.29	302.60	158.50	158.50	158.50
Egypt	6.43	6.43	6.05	2.97	2.97
Iraq	23.94	22.35	22.35	15.96	15.96
Jordan				54.51	54.51
Kuwait	127.09	21.18	21.18	21.18	52.95
Lebanon	36.66	36.66	43.06	36.66	36.66
Libya	33.59	33.59	74.20	74.20	74.20
Mauritania	333.28	333.28	333.28	11.11	111.09
Morocco	13.65	13.65	12.76	12.76	12.76
Oman	24.03	24.03	22.88	13.73	14.42
Palestine				11.43	
Qatar	43.33	43.33	43.33	24.07	22.34
Saudi Arabia	30.35	30.35	30.35	30.35	30.35
Somalia	64.20	7.70	7.70	7.70	3.85
Sudan					4.18
Syria	14.45	14.45	14.45	14.45	14.45
Tunisia	18.92	18.92	22.52	4.05	4.05
UAE	78.01	78.01	78.01	30.49	30.49
Yemen	27.54	27.54	22.05		

Arab average	59.47	59.08	53.02	29.78	37.76
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking from cheapest to most expensive, 2017-2021

	2017	2018	2019	2020	2021
Algeria	4	5	3	4	5
Bahrain	9	11	11	15	16
Comoros	-	-	-	-	-
Djibouti	16	16	16	19	19
Egypt	1	1	1	1	1
Iraq	6	8	7	10	9
Jordan	-	-	-	17	15
Kuwait	15	7	6	11	14
Lebanon	11	13	12	16	13
Libya	10	12	14	18	17
Mauritania	17	17	17	5	18
Morocco	2	3	4	7	6
Oman	7	9	9	8	7
Palestine	-	-	-	6	-
Qatar	12	14	13	12	10
Saudi Arabia	8	10	10	13	11
Somalia	13	2	2	3	2
Sudan	-	-	-	-	4
Syria	3	4	5	9	8
Tunisia	5	6	8	2	3
UAE	14	15	15	14	12

■ Least expensive
■ Most expensive



OBSERVATIONS FROM MOBILE BROADBAND TIME SERIES RESULTS



- There have been price and service changes for almost all Arab providers since 2020, with revisions of portfolios and changes to 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, along with the change in the average percentage, with the general cost trend being downwards across all residential baskets. For business baskets, prices have tended more upwards, on average, for all but a limited number of baskets.
- The change in average can be impacted by various factors in addition to tariff changes, such as countries publishing data where they hadn't previously, or vice versa.

Change in overall average

2020-2021	Residential	Business	Residential	Business
0.5 GB	↓	↑	-10%	21%
1 GB	↓	↑	-13%	20%
2 GB	↓	↑	-8%	18%
5 GB	↓	↑	-7%	1%
10 GB	↓	↓	-13%	-7%
20 GB	↓	↓	-15%	-20%
50 GB	↓	↓	-16%	-38%
0.5 GB short validity	↓	↑	-6%	29%
1 GB short validity	↓	↑	-10%	27%

- As with the other services, historic pricing for Sudan has been removed due to the currency devaluation in 2021 distorting the time series.





LEASED LINE BASKET RESULTS 2021



OECD LEASED LINE BASKET, 2010 DEFINITIONS

- The leased line 2010 baskets were unchanged in the 2017 OECD review, and the 2010 baskets defined in 2010 are still current
- 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

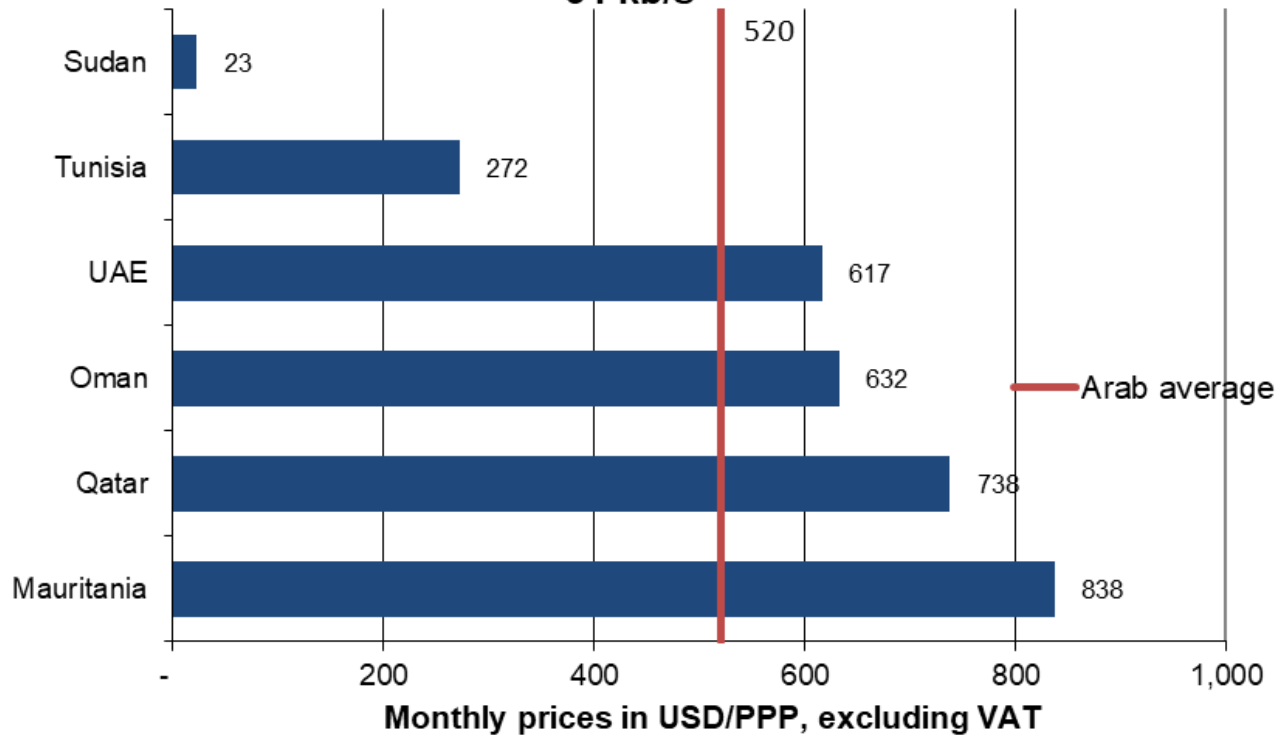
- No price data available for:
 - Comoros
 - Djibouti
 - Egypt
 - Iraq
 - Jordan
 - Libya
 - Morocco
 - Palestine
 - Qatar
 - Saudi Arabia
 - Somalia
 - Syria
 - Yemen
- Other countries may have data missing for specific bitrates





64 KB/S OECD LEASED LINE BASKET RESULTS

AREGNET Leased Line Price Benchmarking 2021
64 kb/s



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

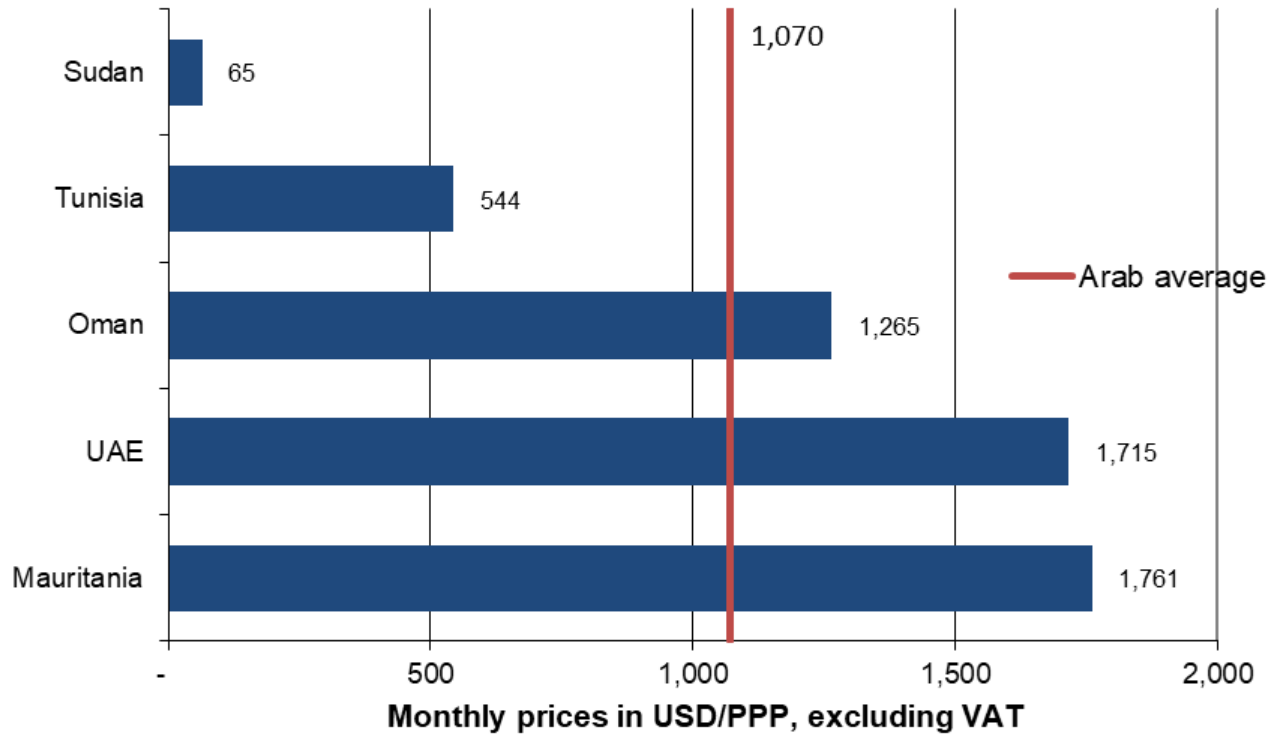
Note: No equivalent OECD data exists.



256KB/S OECD LEASED LINE BASKET RESULTS



AREGNET Leased Line Price Benchmarking 2021 256 kb/s



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

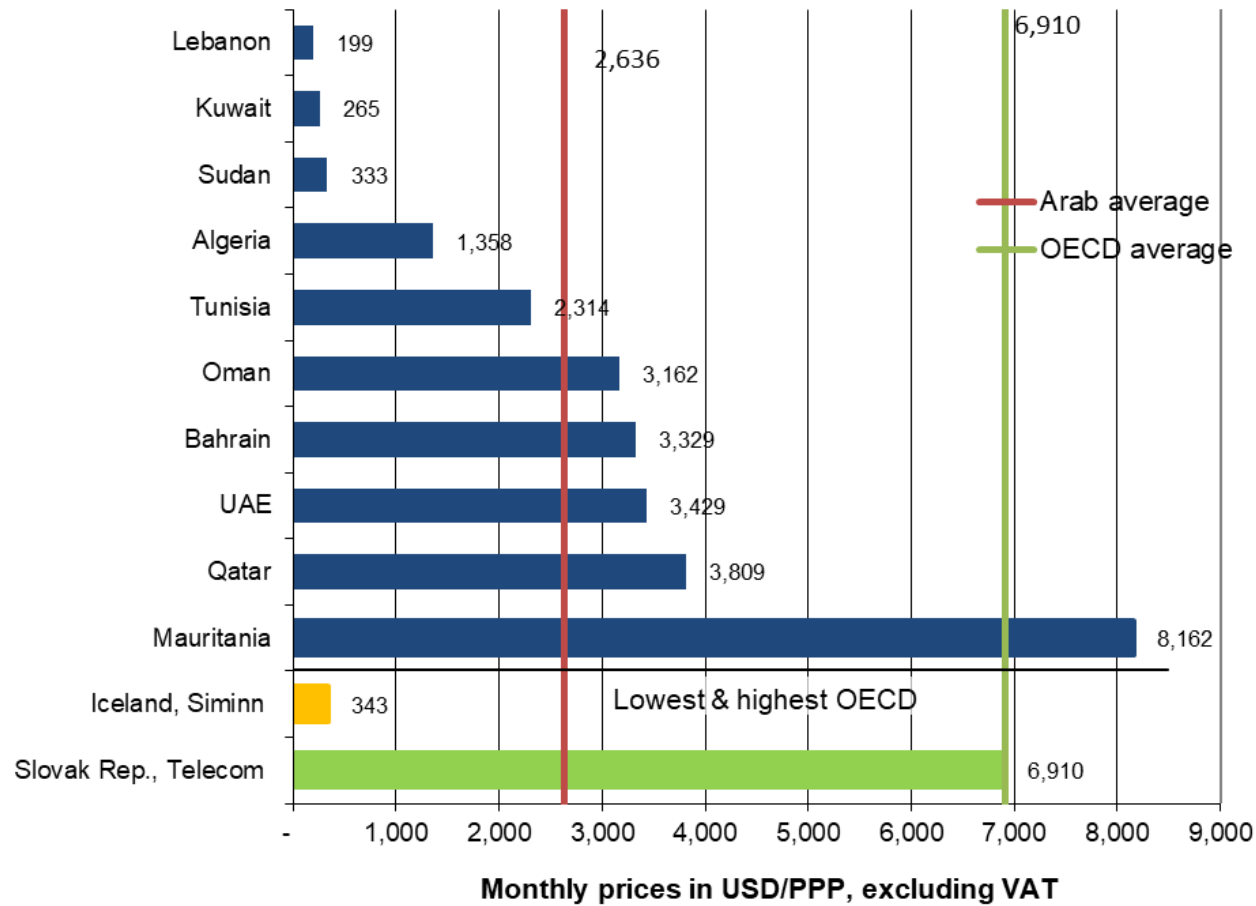
Note: No equivalent OECD data exists.





2 MB/S OECD LEASED LINE BASKET RESULTS

AREGNET Leased Line Price Benchmarking 2021
OECD 2017: 2 Mb/s



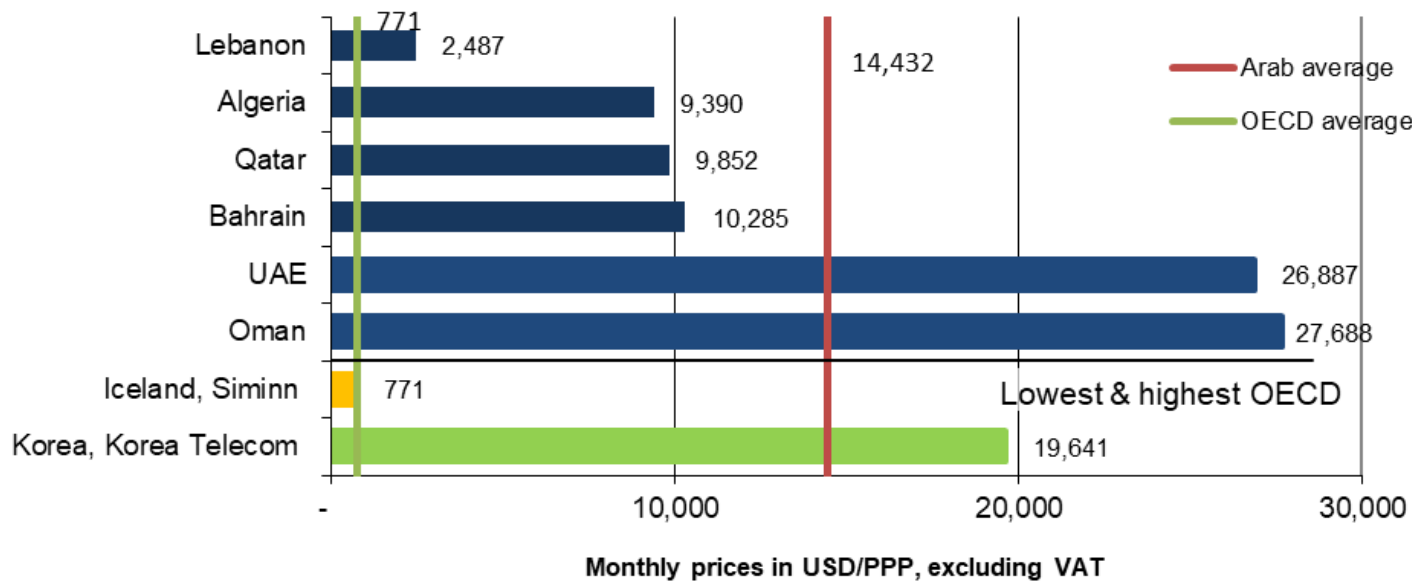
The OECD data shown represents the lowest and highest prices found in OECD countries, and the average price across all 34 OECD countries.





34 MB/S OECD LEASED LINE BASKET RESULTS

AREGNET Leased Line Price Benchmarking 2021
OECD 2017: 34 Mb/s



The OECD data shown represents the lowest and highest prices found in OECD countries, and the average price across all 34 OECD countries.

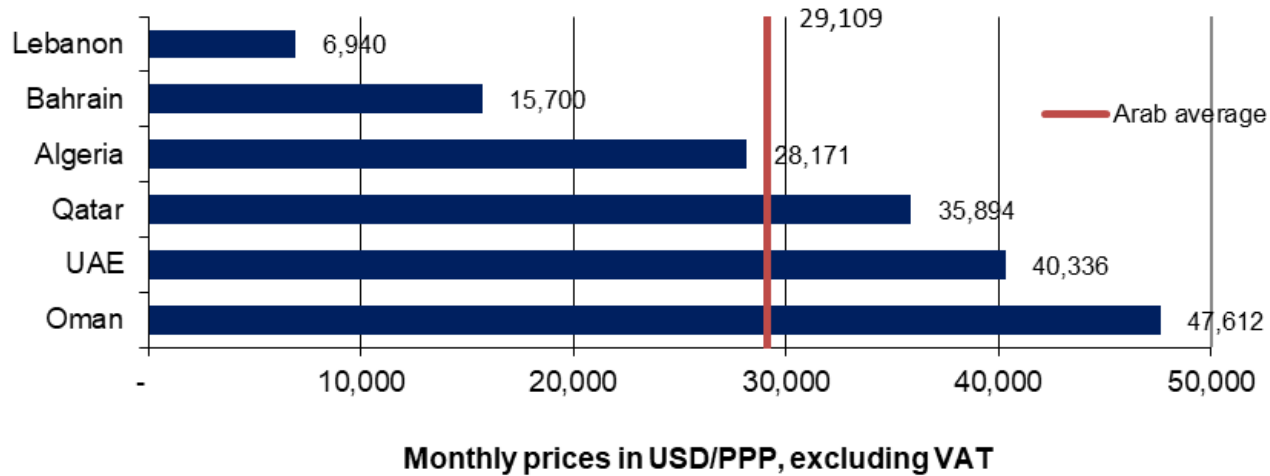
Only a few of the Arab countries publish these prices. The service may still be offered, though.





155 MB/S OECD LEASED LINE BASKET RESULTS

**AREGNET Leased Line Price Benchmarking 2021
155 Mb/s**



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. N/A indicates a limited number of countries where offers are available/published

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

- For leased lines up to 256 kb/s, Sudan, and Tunisia have the lowest prices. UAE features in the top three for 64 kb/s, while for 256 kb/s, Oman is third cheapest.
- For 2 Mb/, Lebanon still features as the cheapest, followed by Kuwait and Sudan.
- Lebanon also has the cheapest offers for 34 Mb/s and 155 Mb/s, followed by Algeria and Qatar for 34 Mb/s and by Bahrain and Algeria for 155 Mb/s.
 - Similar to 64 kb/s and 256 kb/s, very few countries publish prices for circuits at these speeds.
- The number of Arab countries publishing leased line pricing has changed slightly since 2020, as shown in the table below

# countries publishing prices	2020	2021
64 kb/s	5	6
256 kb/s	5	6
2 Mb/s	9	10
34 Mb/s	5	5
155 Mb/s	6	7

- For 2 Mb/s, four countries – Lebanon, Kuwait, Sudan and Algeria - have prices below the OECD average
- For 34 Mb/s, Lebanon and Algeria fall below the OECD average, Bahrain is slightly more expensive, but broadly on par, and UAE is significantly higher than the OECD average cost.
- 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 2016–2021

2010 OECD LEASED LINE BASKETS RANKING, 64 KB/S



Total results for 64 kb/s leased line basket

Results in US\$PPP excluding VAT

	2016	2017	2018	2020	2021
Algeria					
Bahrain	687	687	687		
Comoros					
Djibouti	1,531				
Egypt	97				
Iraq					
Jordan	498				
Kuwait					
Lebanon	444	385			
Libya	88				
Mauritania	1,207	838	838	838	838
Morocco	845				
Oman	632	632	632	632	632
Palestine	331				
Qatar	738				738
Saudi Arabia	764				
Somalia					
Sudan					23
Syria	7				
Tunisia	272	272	272	272	272
UAE	1,242	617	617	617	617
Yemen	573				

Arab average	622	572	609	590	520
--------------	-----	-----	-----	-----	-----

Below Arab average
 Above Arab average

Ranking for 64 kb/s leased line basket

	2016	2017	2018	2020	2021
Algeria	-	-	-	-	-
Bahrain	10	5	4	-	-
Comoros	-	-	-	-	-
Djibouti	16	-	-	-	-
Egypt	3	-	-	-	-
Iraq	-	-	-	-	-
Jordan	7	-	-	-	-
Kuwait	-	-	-	-	-
Lebanon	6	2	-	-	-
Libya	2	-	-	-	-
Mauritania	14	6	5	4	6
Morocco	13	-	-	-	-
Oman	9	4	3	3	4
Palestine	5	-	-	-	-
Qatar	11	-	-	-	5
Saudi Arabia	12	-	-	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	-	1
Syria	1	-	-	-	-
Tunisia	4	1	1	1	2
UAE	15	3	2	2	3
Yemen	8	-	-	-	-

Least expensive
 Most expensive



2010 OECD LEASED LINE BASKETS RANKING, 256 KB/S



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

	2016	2017	2018	2020	2021
Algeria					
Bahrain	1,321	1,321	1,321		
Comoros					
Djibouti	2,197				
Egypt	253				
Iraq					
Jordan	1,093				
Kuwait					
Lebanon	444	385			
Libya	307				
Mauritania	1,796	1,761	1,761	1,761	1,761
Morocco	1,707				
Oman	1,265	1,265	1,265	1,265	1,265
Palestine	590				
Qatar	1,340				1,875
Saudi Arabia	2,412				
Somalia					
Sudan					65
Syria	22				
Tunisia	544	544	544	544	544
UAE	3,265	1,715	1,715	1,715	1,715
Yemen	959				

Arab average	1,220	1,165	1,321	1,321	1,204
--------------	-------	-------	-------	-------	-------

Below Arab average
 Above Arab average

Ranking for 256 kb/s leased line basket

	2016	2017	2018	2020	2021
Algeria	-	-	-	-	-
Bahrain	10	4	3	-	-
Comoros	-	-	-	-	-
Djibouti	14	-	-	-	-
Egypt	2	-	-	-	-
Iraq	-	-	-	-	-
Jordan	8	-	-	-	-
Kuwait	-	-	-	-	-
Lebanon	4	1	-	-	-
Libya	3	-	-	-	-
Mauritania	13	6	5	4	5
Morocco	12	-	-	-	-
Oman	9	3	2	2	3
Palestine	6	-	-	-	-
Qatar	11	-	-	-	6
Saudi Arabia	15	-	-	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	-	1
Syria	1	-	-	-	-
Tunisia	5	2	1	1	2
UAE	16	5	4	3	4
Yemen	7	-	-	-	-

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

	2016	2017	2018	2020	2021
Algeria	1,678	1,678	1,358	1,358	1,358
Bahrain	4,702	4,702	4,702	3,329	3,329
Comoros					
Djibouti	4,099				
Egypt	585				
Iraq					
Jordan	5,585				
Kuwait			265	265	265
Lebanon	889	826	199	199	199
Libya	519				
Mauritania		8,162	8,162	8,162	8,162
Morocco	4,177				
Oman	3,162	3,162	3,162	3,162	3,162
Palestine	2,697				
Qatar	3,809				3,809
Saudi Arabia	3,982				
Somalia					
Sudan					333
Syria	127				
Tunisia	2,314	2,314	2,314	2,314	2,314
UAE	5,341	3,429	3,429	3,429	3,429
Yemen	4,518				

Arab average	3,011	3,468	2,949	2,777	2,636
--------------	-------	-------	-------	-------	-------

■ Below Arab average
■ Above Arab average

Ranking for OECD 2 Mb/s leased line basket

	2016	2017	2018	2020	2021
Algeria	5	2	3	3	4
Bahrain	14	6	7	6	7
Comoros	-	-	-	-	-
Djibouti	11	-	-	-	-
Egypt	3	-	-	-	-
Iraq	-	-	-	-	-
Jordan	16	-	-	-	-
Kuwait	-	-	2	2	2
Lebanon	4	1	1	1	1
Libya	2	-	-	-	-
Mauritania	-	7	8	8	10
Morocco	12	-	-	-	-
Oman	8	4	5	5	6
Palestine	7	-	-	-	-
Qatar	9	-	-	-	9
Saudi Arabia	10	-	-	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	-	3
Syria	1	-	-	-	-
Tunisia	6	3	4	4	5
UAE	15	5	6	7	8
Yemen	13	-	-	-	-

■ 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

	2016	2017	2018	2020	2021
Algeria	15,220	15,220	9,390	9,390	9,390
Bahrain				10,285	10,285
Comoros					
Djibouti					
Egypt	3,893				
Iraq					
Jordan					
Kuwait					
Lebanon			2,487	2,487	2,487
Libya					
Mauritania					
Morocco	17,174				
Oman	27,688	27,688	27,688	27,688	27,688
Palestine					
Qatar	9,852				
Saudi Arabia	24,459				
Somalia					
Sudan					
Syria					
Tunisia					
UAE	38,256	26,887	26,887	26,887	26,887
Yemen	56,514				

Arab average	24,132	23,265	16,613	15,348	15,348
--------------	--------	--------	--------	--------	--------

■ Below Arab average
■ Above Arab average

Ranking for OECD 34 Mb/s leased line basket

	2016	2017	2018	2020	2021
Algeria	3	1	2	2	2
Bahrain	-	-	-	3	3
Comoros	-	-	-	-	-
Djibouti	-	-	-	-	-
Egypt	1	-	-	-	-
Iraq	-	-	-	-	-
Jordan	-	-	-	-	-
Kuwait	-	-	-	-	-
Lebanon	-	-	1	1	1
Libya	-	-	-	-	-
Mauritania	-	-	-	-	-
Morocco	4	-	-	-	-
Oman	6	3	4	5	5
Palestine	-	-	-	-	-
Qatar	2	-	-	-	-
Saudi Arabia	5	-	-	-	-
Somalia	-	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	7	2	3	4	4
Yemen	8	-	-	-	-

■ Least expensive
■ Most expensive



2010 OECD LEASED LINE BASKETS RANKING, 155 MB/S



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

	2016	2017	2018	2020	2021
Algeria	42,370	42,979	43,101	44,013	44,501
Bahrain	27,317	27,317	28,171	28,171	28,171
Comoros				15,700	15,700
Djibouti					
Egypt					
Iraq	7,785				
Jordan					
Kuwait					
Lebanon					
Libya			6,940	6,940	6,940
Mauritania					
Morocco					
Oman					
Palestine	47,612	47,612	47,612	47,612	47,612
Qatar					
Saudi Arabia	35,894				35,894
Somalia	49,962				
Sudan					
Syria					
Tunisia					
UAE					
Yemen	57,391	40,336	40,336	40,336	40,336
Arab average	38,333	39,561	33,232	30,462	31,308

Below Arab average
 Above Arab average

Ranking for 155 Mb/s leased line basket

	2016	2017	2018	2020	2021
Algeria	4	3	4	5	6
Bahrain	2	1	2	3	3
Comoros	-	-	-	2	2
Djibouti	-	-	-	-	-
Egypt	-	-	-	-	-
Iraq	1	-	-	-	-
Jordan	-	-	-	-	-
Kuwait	-	-	-	-	-
Lebanon	-	-	-	-	-
Libya	-	-	1	1	1
Mauritania	-	-	-	-	-
Morocco	-	-	-	-	-
Oman	-	-	-	-	-
Palestine	5	4	5	6	7
Qatar	-	-	-	-	-
Saudi Arabia	3	-	-	-	4
Somalia	6	-	-	-	-
Sudan	-	-	-	-	-
Syria	-	-	-	-	-
Tunisia	-	-	-	-	-
UAE	-	-	-	-	-
Yemen	7	2	3	4	5

Least expensive
 Most expensive





OBSERVATIONS FROM LEASED LINE TIME SERIES RESULTS

- Leased line prices were not reported in 2019, but were re-introduced in 2020. As a result, the time series runs for an extra year, from 2016-2021
- Prices have been generally stable over time with either no or only occasional changes to prices by operators.
- Over the period 2020 to 2021, the only change was the introduction of published prices from Qatar.
- Due to the devaluation of the Sudanese currency in 2021, the inclusion of historical pricing produces distorted results, and historic pricing for Sudan has been removed, which has impacted the average, to some degree.
- The introduction of pricing for Qatar has also impacted the average.
- The average price changes for each basket between 2018/2020 and 2020/2021 are shown in the table below

	2017-2018	2018-2020
64 kb/s	-3.2%	-11.8%
256 kb/s	0.0%	-8.9%
2 Mb/s	-5.8%	-5.1%
34 Mb/s	-7.6%	0.0%
155 Mb/s	-8.3%	4.4%

Percentage change 2018/20 and 2020/21





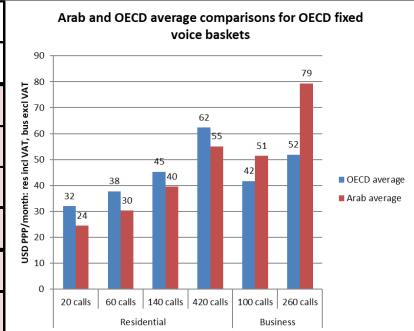
SUMMARY OF THE MAIN FINDINGS FROM THE BENCHMARKING STUDY

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



- The cheapest and most expensive countries throughout are shown in the table below, with an Arab/OECD average comparison shown alongside:

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



- The trend from previous updates continues for residential services. A large proportion of countries are either below the OECD average, or are on par with it, and the Arab average is consistently below that of the OECD average. Consequently, at this level of usage, the Arab average is below that of the OECD, between 12-24% cheaper.
- For business services, The position is reversed, with a large proportion of countries above the OECD average, and the Arab average is consistently higher than that of the OECD, 23% for the 100 calls basket and 53% for the 260 calls basket.
- 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.
- Average costs across almost all residential and business baskets have changed from the previous year, as shown below. The very low usage residential basket cost increased over the past year, however as usage increases, the average cost decreases. For business services, average costs are higher than last year, although the change in average cost declines as usage increase, similar to the residential baskets.

Change in overall average

2020-2021

20 calls residential	↑	5%
60 calls residential	↓	0%
140 calls residential	↓	-5%
420 calls residential	↓	-7%
100 calls business	↑	8%
260 calls business	↑	4%

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



		Arab average 2021 USD PPP	OECD average 2021 USD PPP	Arab average compared to OECD average
Fixed voice Residential	20 calls	24	32	● -24%
	60 calls	30	38	● -20%
	140 calls	40	45	● -13%
	420 calls	55	62	● -12%
Fixed voice Business	100 calls	51	42	● 23%
	260 calls	79	52	● 53%

Residential prices include VAT, business prices exclude VAT

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



- Apart from the 30 calls no data basket, where the Arab average is almost identical to the OECD average, the Arab average is consistently higher than the OECD average, with higher usage baskets being significantly more expensive.

	USD PPP/month inc VAT			% that Arab average is higher or lower than OECD average
	OECD average	Arab average		
30 calls no data	11	11	30 calls no data	0.2%
100 calls no data	16	21	100 calls no data	29%
30 calls, 0.1 GB	15	20	30 calls, 0.1 GB	29%
100 calls, 0.5 GB	20	32	100 calls, 0.5 GB	59%
300 calls, 1 GB	23	53	300 calls, 1 GB	132%
900 calls, 2 GB	27	159	900 calls, 2 GB	489%
30 calls, 0.5 GB	17	23	30 calls, 0.5 GB	35%
100 calls, 2 GB	23	39	100 calls, 2 GB	67%
300 calls, 5 GB	28	67	300 calls, 5 GB	138%
900 calls, 10 GB	37	183	900 calls, 10 GB	399%

- 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 no data	Syria	Egypt	Morocco	Lebanon	Bahrain	Kuwait
100 calls no data	Morocco	Mauritania	Egypt	Lebanon	Saudi Arabia	Kuwait
30 calls, 0.1 GB	Djibouti	Mauritania	Morocco	Lebanon	Sudan	Bahrain
100 calls, 0.5 GB	Mauritania	Egypt	Tunisia	Lebanon	Sudan	Djibouti
300 calls, 1 GB	Algeria	Egypt	Jordan	Lebanon	Sudan	Mauritania
900 calls, 2 GB	Jordan	Algeria	Egypt	Mauritania	Lebanon	Comoros
30 calls, 0.5 GB	Mauritania	Morocco	Tunisia	Lebanon	Djibouti	Sudan
100 calls, 2 GB	Mauritania	Morocco	Algeria	Lebanon	Sudan	Djibouti
300 calls, 5 GB	Algeria	Jordan	Morocco	Lebanon	Sudan	Yemen
900 calls, 10 GB	Algeria	Jordan	Morocco	Mauritania	Lebanon	Sudan

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



- In terms of changes, there has been a general mix of decreases and increases over the period 2020 to 2021. , the predominant change is one of decreasing prices, most notably for the higher data baskets. The overall average has been impacted by the removal of historical data for Sudan due to the currency devaluation in 2021, making time comparison difficult for this market
- Most providers made changes to mobile pricing, and in particular to data allowances

Change in overall average

2020-2021

30 calls no data	↑	1%
100 calls no data	↓	-2%
30 calls, 0.1 GB	↑	10%
100 calls, 0.5 GB	↑	12%
300 calls, 1 GB	↑	3%
900 calls, 2 GB	↓	0%
30 calls, 0.5 GB	↑	15%
100 calls, 2 GB	↑	7%
300 calls, 5 GB	↑	7%
900 calls, 10 GB	↑	1%

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



		Arab average 2021 USD PPP	OECD average 2021 USD PPP	Arab average compared to OECD average
No data	30 calls no data	11	11	● 0%
	100 calls no data	21	16	● 29%
Low data	30 calls, 0.1 GB	20	15	● 29%
	100 calls, 0.5 GB	32	20	● 59%
	300 calls, 1 GB	53	23	● 132%
	900 calls, 2 GB	159	27	● 489%
High data	30 calls, 0.5 GB	23	17	● 35%
	100 calls, 2 GB	39	23	● 67%
	300 calls, 5 GB	67	28	● 138%
	900 calls, 10 GB	183	37	● 399%

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



- The tables below shows the 3 cheapest and 3 most expensive countries for each of the baskets considered for medium usage – residential and business, as well as both the OECD and Arab average for each basket (low and high usage may differ, but typically don't). ≥ 1000 Mb/s is not considered for business due to limited availability of offerings.

Residential-medium usage	Cheapest			Most expensive			USD PPP/month inc VAT	
	1st	2nd	3rd	1st	2nd	3rd	OECD average	Arab average
≥ 0.25 Mb/s / 15 GB	Syria	Libya	Iraq	Saudi Arabia	Qatar	Djibouti	46	61
≥ 10 Mb/s / 30 GB	Egypt	Tunisia	Kuwait	Mauritania	Sudan	Syria	47	141
≥ 25 Mb/s / 60 GB	Egypt	Palestine	Tunisia	Syria	Qatar	UAE	51	131
≥ 100 Mb/s / 120 GB	Egypt	Palestine	Tunisia	Syria	Kuwait	Saudi Arabia	55	228
≥ 1000 Mb/s / 300 GB	Oman	Jordan	Qatar	UAE	Bahrain		84	574

Business-medium usage	Cheapest			Most expensive			USD PPP/month excl VAT	
	1st	2nd	3rd	1st	2nd	3rd	OECD average	Arab average
≥ 0.25 Mb/s / 15 GB	Egypt	Morocco	Djibouti	UAE	Bahrain	Qatar	51	133
≥ 10 Mb/s / 30 GB	Egypt	Morocco	Lebanon	Comoros	Djibouti	Mauritania	51	419
≥ 25 Mb/s / 60 GB	Jordan	Tunisia	Morocco	Djibouti	Algeria	Oman	56	536
≥ 100 Mb/s / 120 GB	Morocco	Jordan	Tunisia	Algeria	Oman	Bahrain	66	499
≥ 1000 Mb/s / 300 GB								

- Below is a comparison of the Arab and OECD averages for each of the baskets considered. The average Arab residential cost is still considerably higher than the OECD average or up to 6.8 times higher for the highest speed basket. For business services, the average is up to 9.6 times higher.
 - The residential figure continues to be skewed by particularly high costs in a number of countries, in particular, Mauritania, Sudan and Syria. For business services, the Arab average is heavily skewed by a number of countries, including Algeria, Comoros and Djibouti.

Residential	USD PPP/month inc VAT	
	OECD average	Arab average
≥ 0.25 Mb/s / 15 GB	39.16	55.76
≥ 10 Mb/s / 30 GB	39.29	171.35
≥ 25 Mb/s / 60 GB	47.89	182.08
≥ 100 Mb/s / 120 GB	55.98	290.20

Business	USD PPP/month excl VAT	
	OECD average	Arab average
≥ 0.25 Mb/s / 15 GB	70.19	162.95
≥ 10 Mb/s / 30 GB	180.39	499.87
≥ 25 Mb/s / 60 GB	140.94	675.15
≥ 100 Mb/s / 120 GB	63.78	515.72

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



- The table below summarizes how the overall Arab average changed from 2020-2021. The picture is one mainly of increases across many residential baskets – up to 15%, while for almost all business baskets, the overall average costs fell – up to -21%. For business services, >= 1000 Mb/s, results in this category are very limited and have been excluded.

Change in overall average 2020-2021	Residential			Business		
	Low	Medium	High	Low	Medium	High
>= 0.25 Mb/s / 15 GB	↑	↑	↑	↓	↓	↑
>= 10 Mb/s / 30 GB	↑	↑	↑	↓	↓	↓
>= 25 Mb/s / 60 GB	↓	↓	↓	↓	↓	↓
>= 100 Mb/s / 120 GB	↑	↑	↑	↓	↓	↓
>= 1000 Mb/s / 300 GB	↓	↓	↓			

	Change in average 2020-2021 (Res: Inc VAT, Bus, Excl VAT)	
	Residential	Business
>= 0.25 Mb/s / 15 GB	12%	-9%
>= 10 Mb/s / 30 GB	15%	-17%
>= 25 Mb/s / 60 GB	-12%	-21%
>= 100 Mb/s / 120 GB	9%	-4%
>= 1000 Mb/s / 300 GB	-17%	

- The average speed across all offers, all countries stands at around 183 Mb/s in 2021 (up from just under 70 Mb/s in 2020), with just under 60% of services greater than or equal to 20 Mb/s, up from 40% in 2020.
- There have been changes for most providers in the current update, largely in the form of new plans being added.

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



Residential Fixed Broadband	Arab average 2021 USD PPP	OECD average 2021 USD PPP	Arab average compared to OECD average
>= 0.25 Mb/s / 5 GB: Low use	58	46	27%
>= 0.25 Mb/s / 15 GB: Medium use	61	46	32%
>= 0.25 Mb/s / 45 GB: High use	65	46	41%
>= 10 Mb/s / 10 GB: Low use	141	47	202%
>= 10 Mb/s / 30 GB: Medium use	141	47	201%
>= 10 Mb/s / 90 GB: High use	143	47	201%
>= 25 Mb/s / 20 GB: Low use	131	50	160%
>= 25 Mb/s / 60 GB: Medium use	131	51	159%
>= 25 Mb/s / 180 GB: High use	134	51	165%
>= 100 Mb/s / 40 GB: Low use	228	55	314%
>= 100 Mb/s / 120 GB: Medium use	228	55	313%
>= 100 Mb/s / 360 GB: High use	232	55	320%
>= 100 Mb/s / 360 GB: High use	574	84	582%
>= 100 Mb/s / 360 GB: High use	574	84	582%
>= 100 Mb/s / 360 GB: High use	584	85	589%

Residential prices include VAT

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



Business Fixed Broadband	Arab average 2021 USD PPP	OECD average 2021 USD PPP	Arab average compared to OECD average
>= 0.25 Mb/s / 5 GB: Low use	132	51	● 160%
>= 0.25 Mb/s / 15 GB: Medium use	133	51	● 162%
>= 0.25 Mb/s / 45 GB: High use	162	51	● 220%
>= 10 Mb/s / 10 GB: Low use	419	51	● 718%
>= 10 Mb/s / 30 GB: Medium use	419	51	● 718%
>= 10 Mb/s / 90 GB: High use	421	51	● 719%
>= 25 Mb/s / 20 GB: Low use	536	56	● 862%
>= 25 Mb/s / 60 GB: Medium use	536	56	● 859%
>= 25 Mb/s / 180 GB: High use	536	56	● 855%
>= 100 Mb/s / 40 GB: Low use	499	66	● 654%
>= 100 Mb/s / 120 GB: Medium use	499	66	● 652%
>= 100 Mb/s / 360 GB: High use	499	67	● 649%

Business prices exclude VAT

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



- Mobile broadband services are available across all the Arab countries. The tables below shows the 3 cheapest and 3 most expensive countries for each basket, each speed category, for both residential and business services, as well as the comparison of the Arab country average to the OECD country average. Note, the business calculations exclude VAT.

		Cheapest			Most expensive			Arab:OECD average	
		1st	2nd	3rd	1st	2nd	3rd	Residential	Business
Residential	0.5 GB	Egypt	Sudan	Tunisia	Bahrain	Jordan	Djibouti	Arab:OECD average	
	1 GB	Egypt	Sudan	Tunisia	Lebanon	Bahrain	Jordan		
	2 GB	Egypt	Sudan	Somalia	Lebanon	UAE	Yemen		
	5 GB	Libya	Sudan	Tunisia	Yemen	UAE	Lebanon		
	10 GB	Sudan	Tunisia	Mauritania	Yemen	UAE	Lebanon		
	20 GB	Sudan	Mauritania	Tunisia	Yemen	UAE	Lebanon		
	50 GB	Sudan	Mauritania	Djibouti	Yemen	Comoros	Lebanon		
	0.5 GB short validity	Egypt	Sudan	Somalia	Jordan	Lebanon	Bahrain		
	1 GB short validity	Egypt	Sudan	Somalia	Lebanon	Jordan	Bahrain		
	Business	0.5 GB	Egypt	Tunisia	Sudan	Djibouti	Mauritania		
1 GB		Egypt	Tunisia	Sudan	Djibouti	Mauritania	Libya	1 GB	19%
2 GB		Egypt	Sudan	Somalia	Djibouti	Mauritania	Libya	2 GB	33%
5 GB		Sudan	Tunisia	Egypt	Djibouti	Mauritania	Libya	5 GB	48%
10 GB		Sudan	Tunisia	Somalia	Djibouti	Mauritania	Libya	10 GB	64%
20 GB		Sudan	Tunisia	Oman	Djibouti	Mauritania	UAE	20 GB	96%
50 GB		Sudan	Oman	Tunisia	Djibouti	UAE	Lebanon	50 GB	154%
0.5 GB short validity		Egypt	Sudan	Somalia	Djibouti	Mauritania	Libya	0.5 GB short validity	13%
1 GB short validity		Egypt	Somalia	Tunisia	Djibouti	Mauritania	Libya	1 GB short validity	14%

- The average for the residential service baskets in the Arab countries compared to the OECD average ranges from 13% more expensive, for the 0.5 GB short validity basket, to 154% for the 50 GB basket. For business services, the range is 57% (more expensive) for the 50GB basket, to 148% for the 1 GB short validity basket.
- There have been price and service changes for almost all Arab providers since 2020, with revisions of portfolios and changes to 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, along with the change in the average percentage, with the general cost trend being downwards across all residential baskets. For business baskets, prices have tended more upwards, on average, for all but a limited number of baskets. The change in average can be impacted by various factors in addition to tariff changes, such as countries publishing data where they hadn't previously, or vice versa. As with the other services, historic pricing for Sudan has been removed due to the currency devaluation in 2021 distorting the time series.

	Change in overall average				
	2020-2021	Residential	Business	Residential	Business
0.5 GB		↓	↑	-10%	21%
1 GB		↓	↑	-13%	20%
2 GB		↓	↑	-8%	18%
5 GB		↓	↑	-7%	1%
10 GB		↓	↓	-13%	-7%
20 GB		↓	↓	-15%	-20%
50 GB		↓	↓	-16%	-38%
0.5 GB short validity		↓	↑	-6%	29%
1 GB short validity		↓	↑	-10%	27%

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



Residential Mobile Broadband	Arab average 2021 USD PPP	OECD average 2021 USD PPP	Arab average compared to OECD average
0.5 GB	16	14	● 19%
1 GB	18	15	● 19%
2 GB	22	17	● 33%
5 GB	31	21	● 48%
10 GB	38	23	● 64%
20 GB	56	28	● 96%
50 GB	98	38	● 154%
0.5 GB short validity	15	13	● 13%
1 GB short validity	16	14	● 14%

Business Mobile Broadband	Arab average 2021 USD PPP	OECD average 2021 USD PPP	Arab average compared to OECD average
0.5 GB	36	15	● 140%
1 GB	38	15	● 148%
2 GB	39	16	● 143%
5 GB	41	20	● 107%
10 GB	48	25	● 92%
20 GB	56	30	● 88%
50 GB	76	48	● 57%
0.5 GB short validity	36	15	● 139%
1 GB short validity	38	15	● 148%

Residential prices include VAT, business prices exclude VAT

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. N/A indicates a limited number of countries where offers are available/published

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

- Leased line prices were not reported in 2019, but were re-introduced in 2020. As a result, the time series runs for an extra year, from 2016-2021. Prices have been generally stable over time with either no or only occasional changes to prices by operators.
- The average price changes for each basket between 2018/2020 and 2020/2021 are shown in the table below

	2017-2018	2018-2020
64 kb/s	-3.2%	-11.8%
256 kb/s	0.0%	-8.9%
2 Mb/s	-5.8%	-5.1%
34 Mb/s	-7.6%	0.0%
155 Mb/s	-8.3%	4.4%

		Arab average 2021 USD PPP	OECD average 2021 USD PPP	Arab average compared to OECD average
Leased Lines	64 Kb/s	520	N/A	
	256 kb/s	1204	N/A	
	2 Mb/s	2636	1971	34%
	34 Mb/s	15348	9513	61%
	155 Mb/s	31308	N/A	



APPENDIX



EXCHANGE RATES AND VAT

Exchange rates used: Related to:	US\$	Dec-21 US\$ PPP	VAT %	World Bank CPLs 2020
Algeria	0.0072	0.0244218	19.0 %	0.294
Bahrain	2.6365	5.2835070	5.0 %	0.499
Comoros	0.0023	0.0054374	10.0 %	0.423
Djibouti	0.0056	0.0095101	10.0 %	0.592
Egypt	0.0634	0.2257651	14.0 %	0.281
Iraq	0.0007	0.0015962	0.0 %	0.426
Jordan	1.4104	3.4068599	16.0 %	0.414
Kuwait	3.2990	5.2953612	0.0 %	0.623
Lebanon	0.0007	0.0016583	11.0 %	0.398
Libya	0.2159	0.6330205	0.0 %	0.341
Mauritania	0.0027	0.0085912	16.0 %	0.318
Morocco	0.1069	0.2594660	20.0 %	0.412
Oman	2.5899	4.8050278	5.0 %	0.539
Palestine	0.2825	0.6348315	16.0 %	0.445
Qatar	0.2720	0.4814867	0.0 %	0.565
Saudi Arabia	0.2663	0.6193023	15.0 %	0.430
Somalia	0.0017	0.0046893	10.0 %	0.354
Sudan	0.0221	0.1580000	35.0 %	0.140
Syria	0.0020	0.0031707	0.0 %	0.615
Tunisia	0.3472	1.0717284	19.0 %	0.324
UAE	0.2722	0.4418994	5.0 %	0.616
Yemen	0.0040	0.0091514	5.0 %	0.436

OECD countries World Bank CPLs 2020	
Australia	0.987
Austria	0.873
Belgium	0.858
Canada	0.900
Chile	0.528
Colombia	0.366
Czech Rep.	0.545
Denmark	1.008
Estonia	0.607
Finland	0.960
France	0.836
Germany	0.825
Greece	0.621
Hungary	0.481
Iceland	1.073
Ireland	0.895
Israel	1.042
Italy	0.757
Japan	0.963
Korea	0.730
Luxembourg	0.979
Mexico	0.443
Netherlands	0.883
New Zealand	0.937
Norway	1.065
Poland	0.457
Portugal	0.651
Slovak Rep.	0.602
Slovenia	0.636
Spain	0.706
Sweden	0.952
Switzerland	1.214
Turkey	0.304
UK	0.897
USA	1.00

Exchange rates taken from the Oanda web service on the 1 December 2020

PPPs are based on World Bank CPL data in 2020 (latest available).

World Bank rates also used for OECD countries to provide more consistent comparison to Arab country results. Rates used shown.



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, Colombia, Czech Rep., Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, 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.