



2011 Telecommunications Retail Prices Benchmarking Report for Arab Countries

Prepared by Teligen on behalf of TRA Bahrain

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Acknowledgements

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- The operators who have contributed with additional tariff information

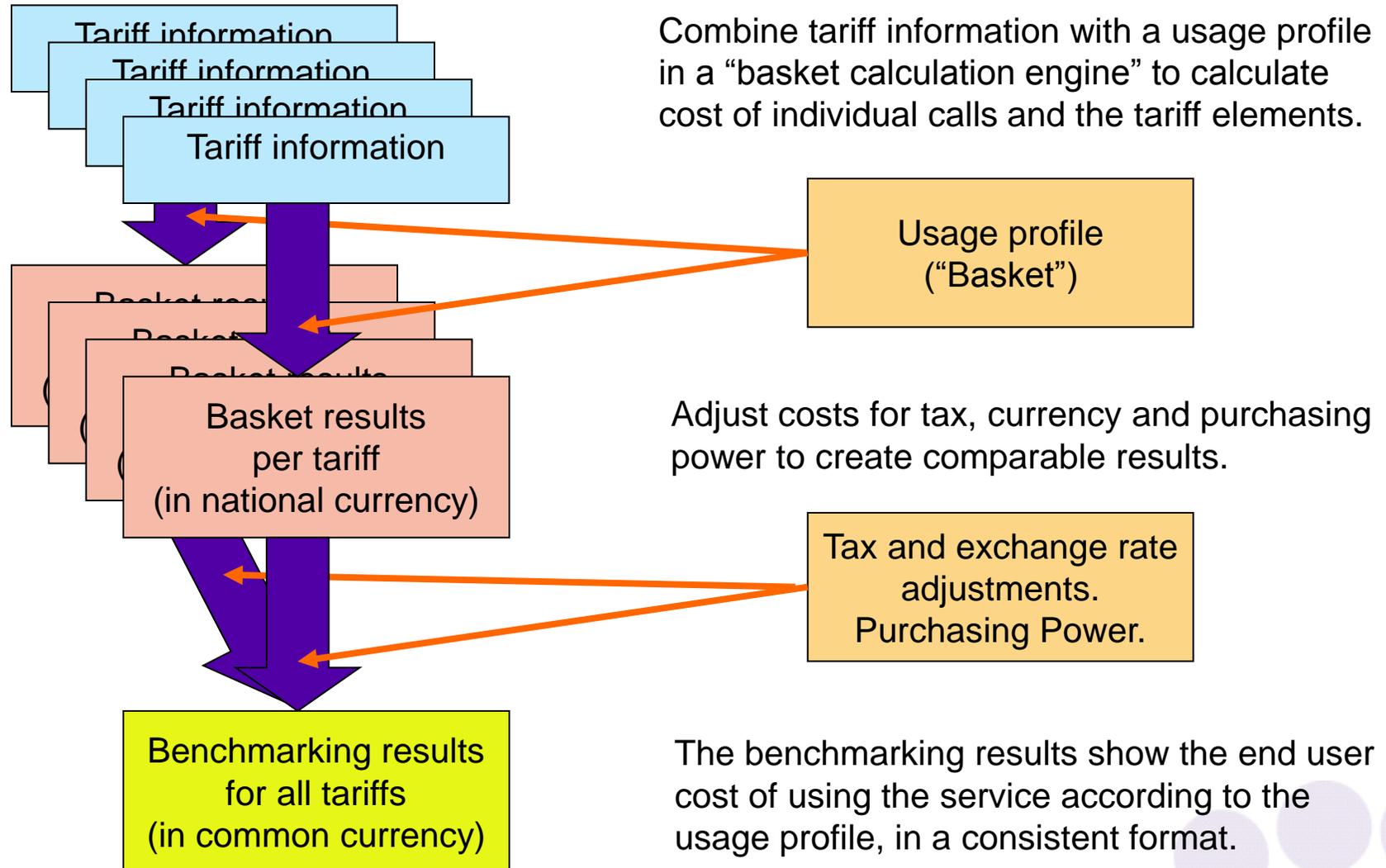
Contents of this report

• Background to the study and basket concept	4
• Results from the PSTN basket for 2011, time series and ranking	6
• Results from the mobile basket for 2011, time series and ranking	31
• Results from the leased line basket for 2011, time series and ranking	56
• Results from the broadband basket for 2011, time series and ranking	78
• Results from the mobile broadband basket for 2011 and ranking	115
• Results from the call price comparison for 2011 and time series	127
• Summary of main findings from the benchmarking study	140
• Appendix	
– Results from the 2006 OECD baskets (PSTN and mobile)	142
– Exchange rates and VAT	152
– Purchasing power parities (PPPs)	153
– List of acronyms used	154

Background to the study and basket context

- The benchmarking study was originally initiated by TRA Bahrain in 2008 and has been updated annually since then. This update for 2011 was commissioned by TRA Bahrain on behalf of AREGNET.
- In an increasingly competitive market 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. Additionally, time series data is also presented, covering the development of basket costs from 2008 to 2011.
- The benchmarking covers the following services:
 - Fixed voice (PSTN) (OECD basket equivalent)
 - Mobile telephony (OECD basket equivalent)
 - Leased Lines (OECD basket equivalent)
 - Broadband ADSL (OECD basket equivalent)
 - Mobile broadband Teligen's T-Wireless basket
 - Call cost for specific types of calls
- The methodologies for fixed and mobile telephony, leased lines and fixed broadband are identical to the OECD Price Benchmarking baskets for 2010, with minor changes. A separate document explaining the methodology used in this study is available. The results presented are in line with the OECD 2010 baskets, however, as earlier studies were based on the 2006 baskets, results from these baskets have been included in the appendix to this report, at the request of TRA Bahrain, for completeness (fixed and mobile telephony only).
- The data was collected by Teligen from public sources on the Internet, and was subsequently passed to national regulators for comments.

Price benchmarking with “Baskets”



PSTN 2011 basket results (2010 version of OECD baskets)

Fixed voice (PSTN) data issues

- Tariff data was researched from operator websites in March 2011.
 - Additional clarifications have been sought from operators and regulators.
 - Regulators have been offered the opportunity to comment on the tariff information prior to final publication.
- Due to lack of published data, and lack of feedback, no data is available for:
 - Comoros
 - Iraq
 - Kuwait
- Part of data is missing for:
 - Syria (no prices for calls to mobile)
 - Yemen (no prices for national calls and fixed line)
 - No business tariffs are available for PSTN in Sudan
- The analysis covers up to 77 tariffs from the incumbent operators in 19 countries



Fixed voice (PSTN) baskets, 2010 version

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

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

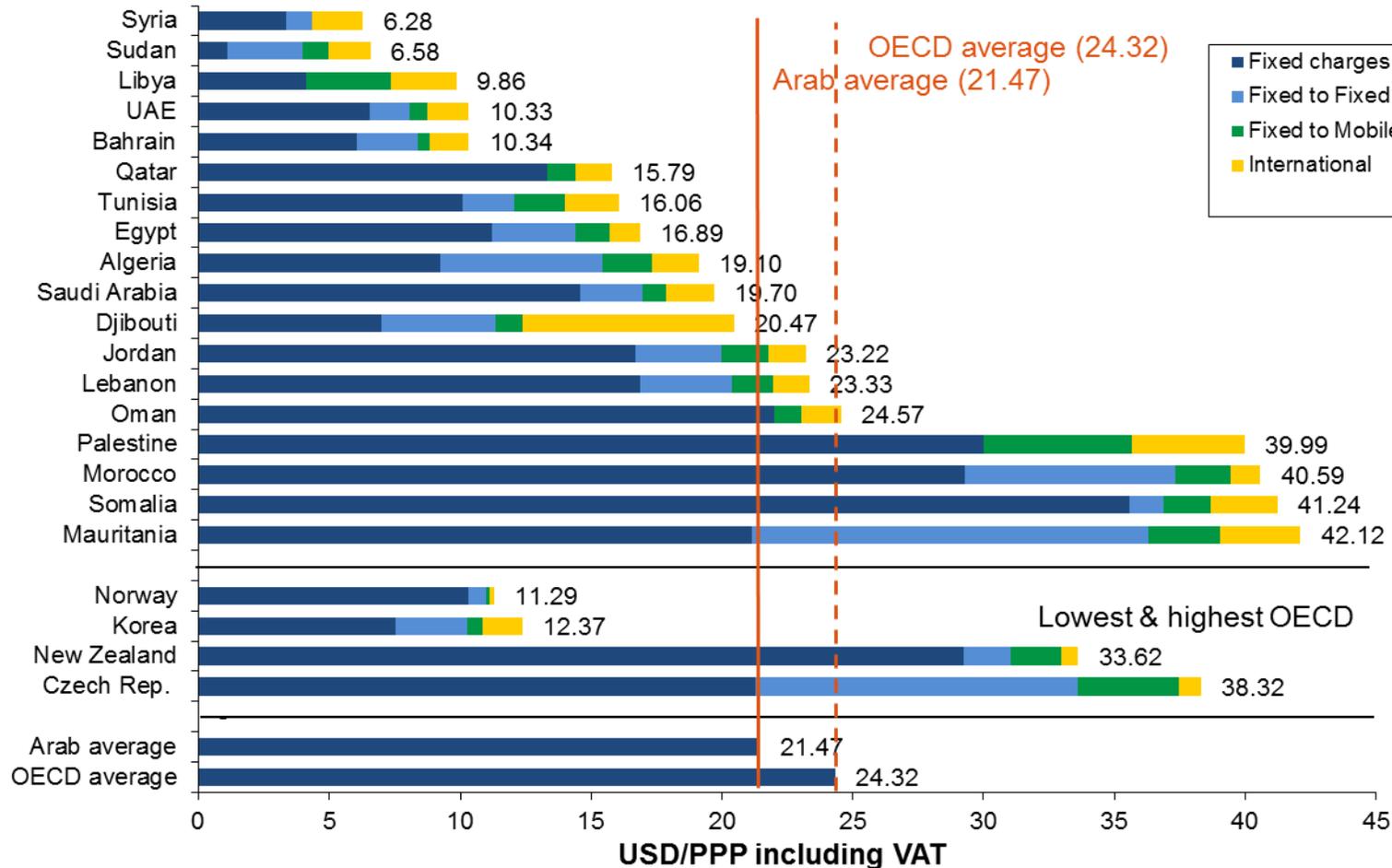
- Tariffs from the incumbent operator in each country
 - Several tariff packages can be covered for each operator
 - The results show the lowest cost option for each operator
- Tariff information included in basket calculation:
 - Fixed charges for installation and rental
 - Usage charges covering local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



2010 OECD PSTN basket

20 calls/month, Residential

PSTN fixed voice OECD 20 calls residential basket
Tariffs as of March 2011



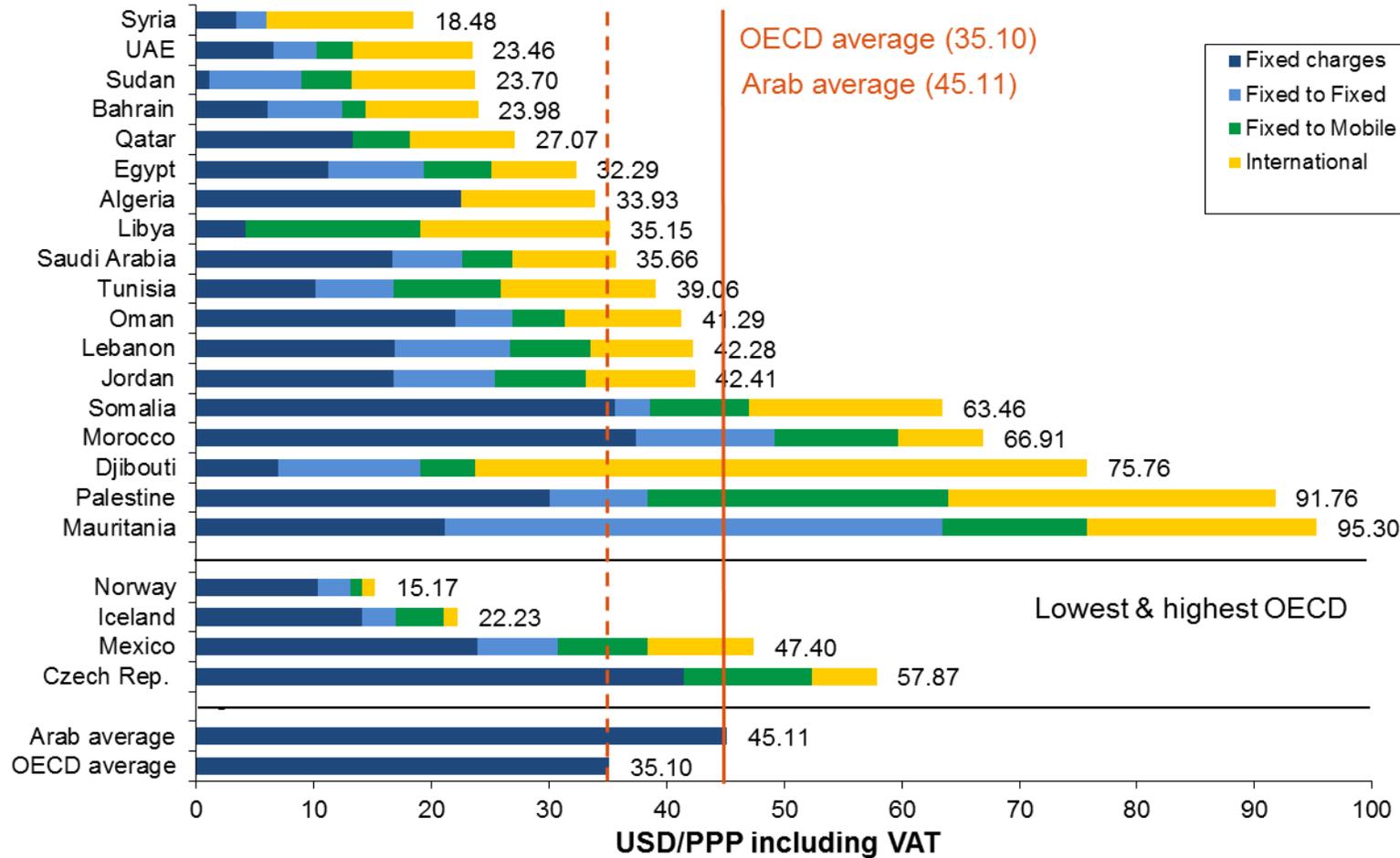
No national tariffs for Yemen are included.
No F2M prices for Syria are included.



2010 OECD PSTN basket

60 calls/month, Residential

PSTN fixed voice OECD 60 calls residential basket
Tariffs as of March 2011



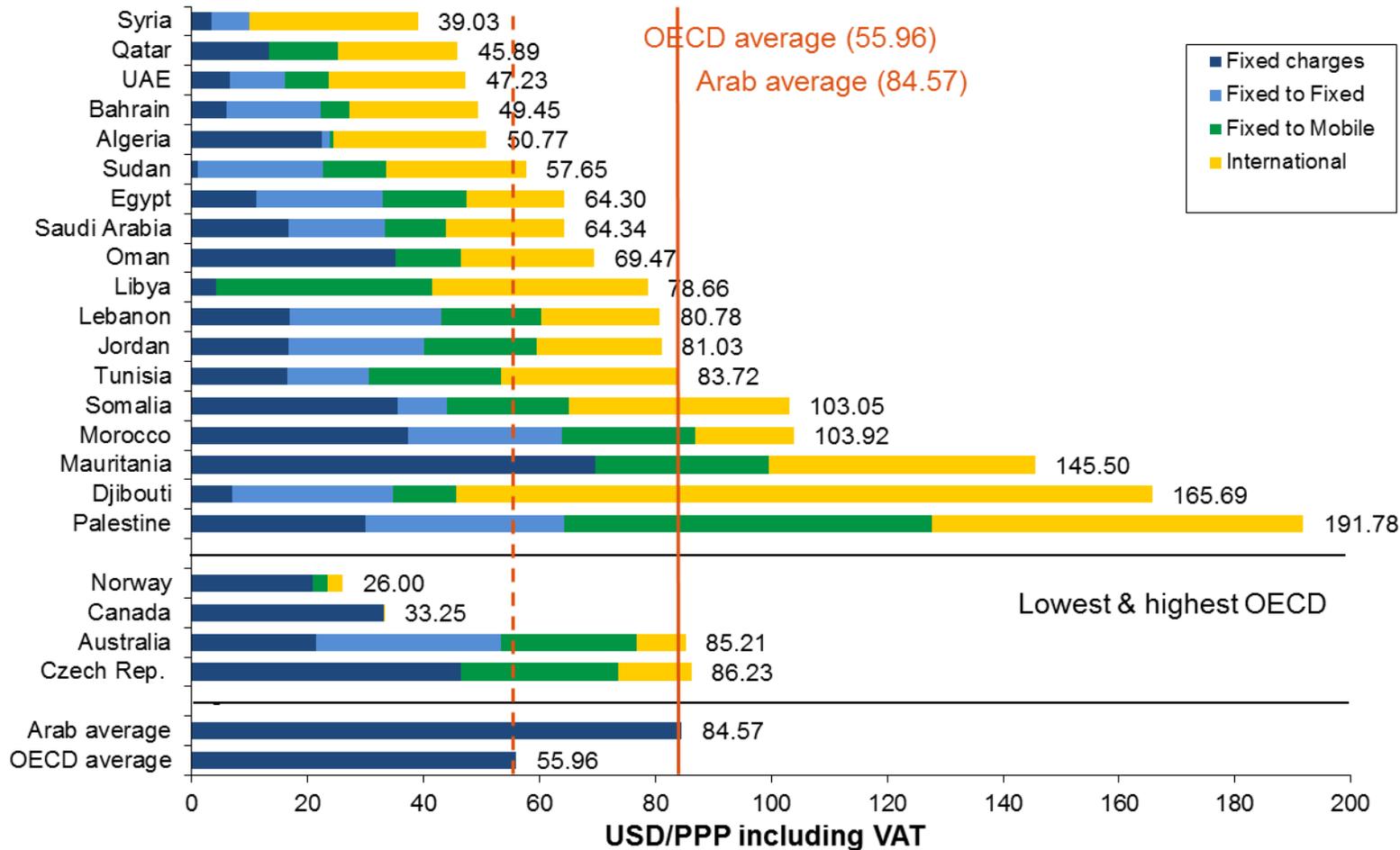
No national tariffs for Yemen are included.
No F2M prices for Syria are included.



2010 OECD PSTN basket

140 calls/month, Residential

PSTN fixed voice OECD 140 calls residential basket
Tariffs as of March 2011

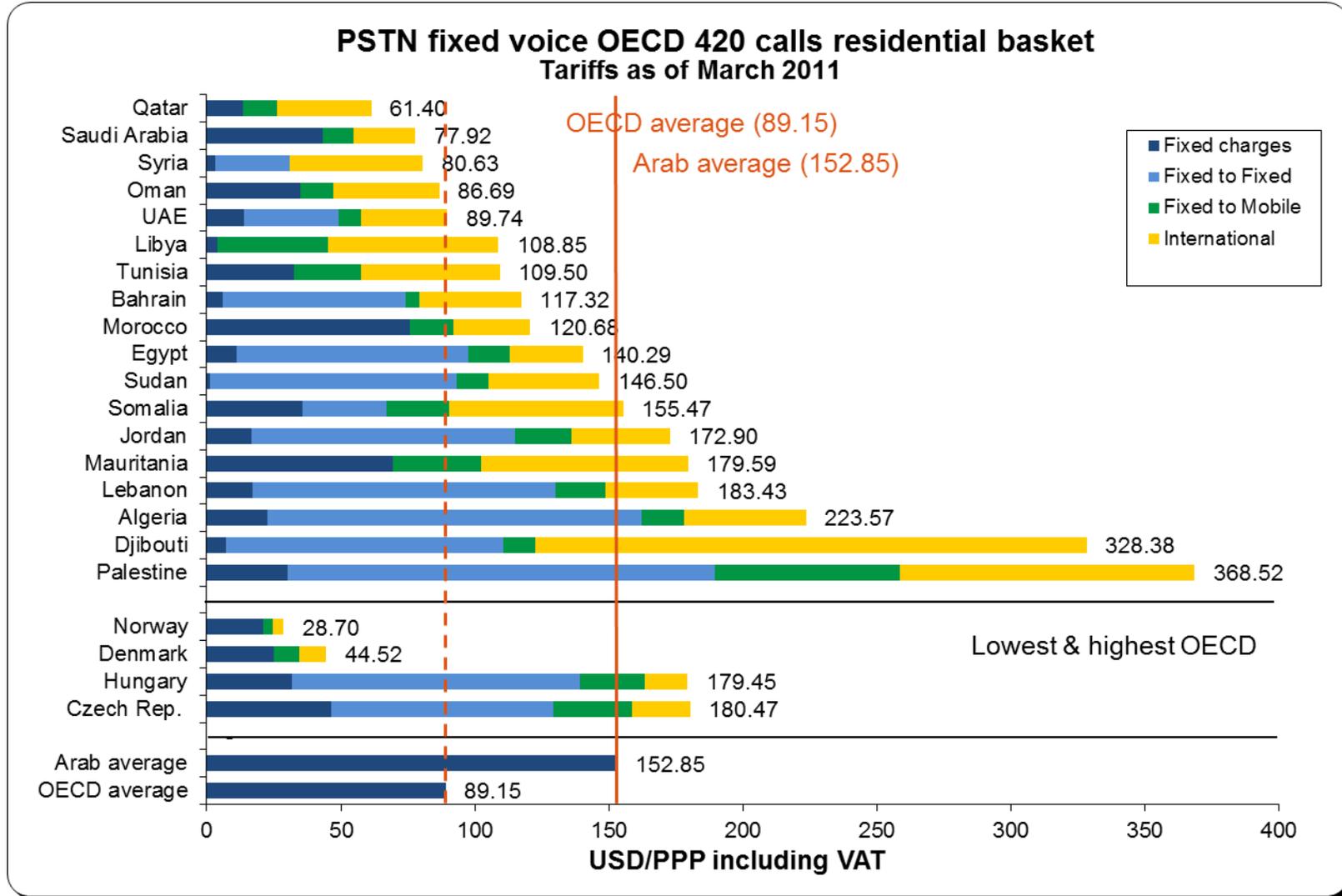


No national tariffs for Yemen are included. No F2M prices for Syria are included.



2010 OECD PSTN basket

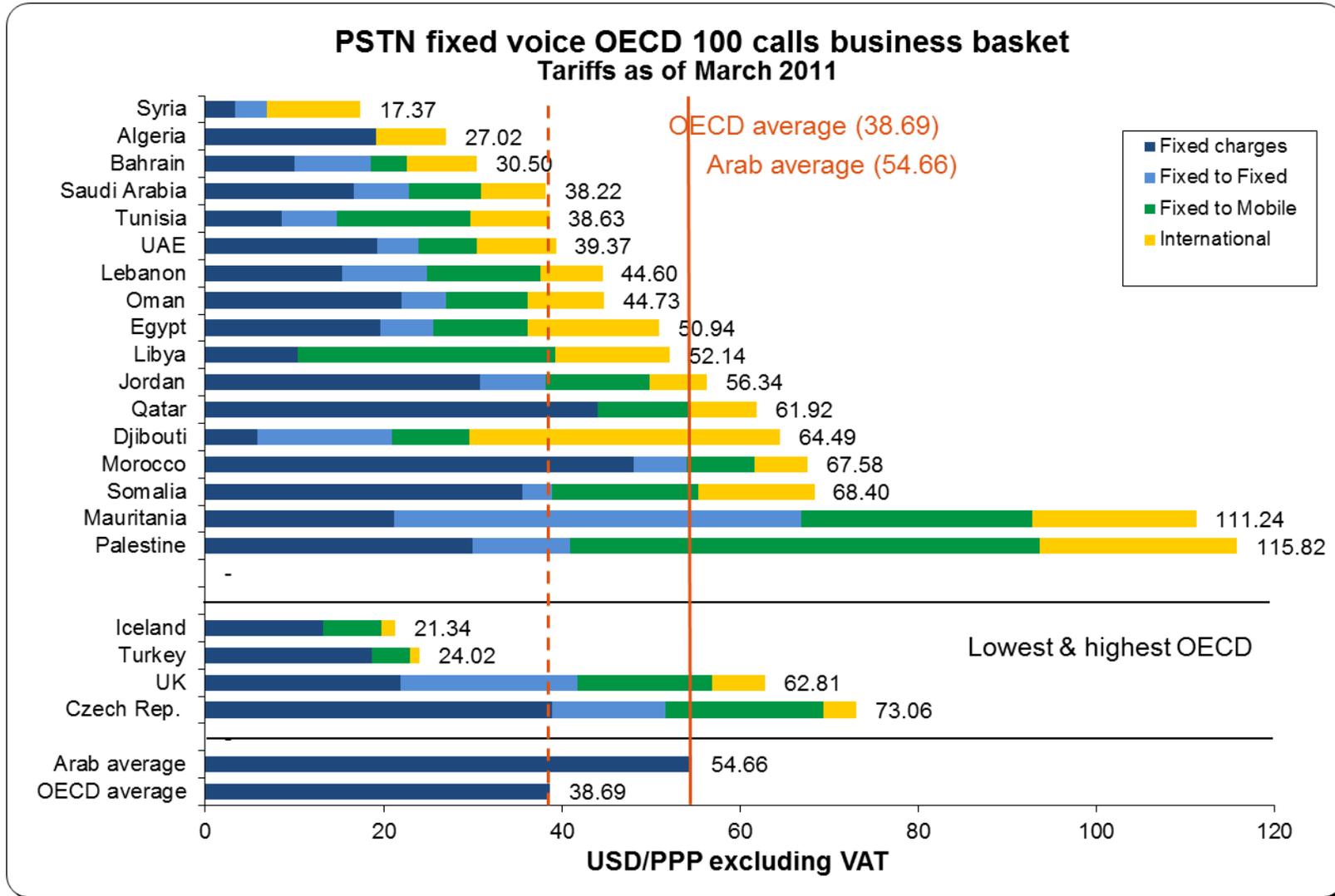
420 calls/month, Residential



No national tariffs for Yemen are included.
No F2M prices for Syria are included.



2010 OECD PSTN basket 100 calls/month, Business

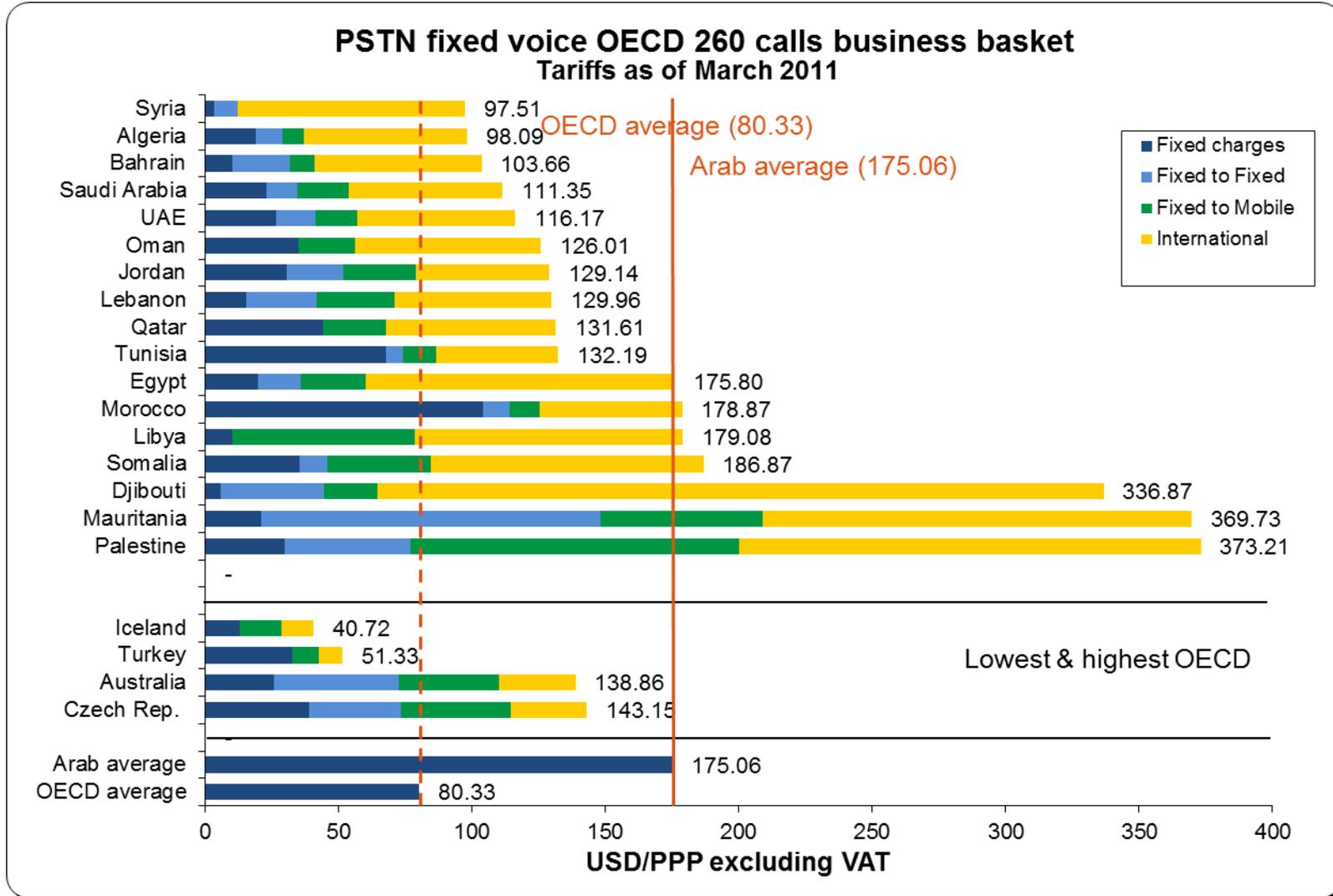


No national tariffs for Yemen are included.
 No F2M prices for Syria are included
 There are no business tariffs for Sudan.



2010 OECD PSTN basket

260 calls/month, Business



No national tariffs for Yemen are included.
No F2M prices for Syria are included
There are no business tariffs for Sudan.



Observations from PSTN basket results

- The cheapest countries throughout are : (*)
 - Syria, UAE, Bahrain, Qatar and Saudi Arabia
 - The exact order of these may vary with usage level
 - This list is based on average ranking across all six baskets, residential and business
 - Sudan, which has no prices for business services, ranks fairly cheaply if we consider residential only services, while Saudi Arabia becomes more expensive, especially for the lower use baskets
- Most of these countries have total costs below or just above the OECD average for the residential baskets
- Costs for the business baskets in the Arab countries tend to be above the OECD average, particularly for the highest usage business basket
- Generally the Arab countries in North Africa are more expensive than the Arab countries in the Middle East.
- As before, the price range for the Arab countries (cheapest to most expensive) is wider than for the OECD countries
 - The cheapest OECD country is below the cheapest Arab country, on all baskets except the lowest usage residential
 - The most expensive Arab country is more expensive than the most expensive OECD country, and significantly so for higher usage baskets
- Most of the Arab countries 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.
 - This situation has not changed much over time
- Even with significantly lower fixed cost the overall cost of using the service is higher in the Arab countries than in the OECD countries.
- There remains a clear lack of rebalancing in most Arab countries, where the usage revenue covers a significant portion of the fixed line cost for the operators.
- Standard rates for international calls are significantly more expensive than in OECD countries

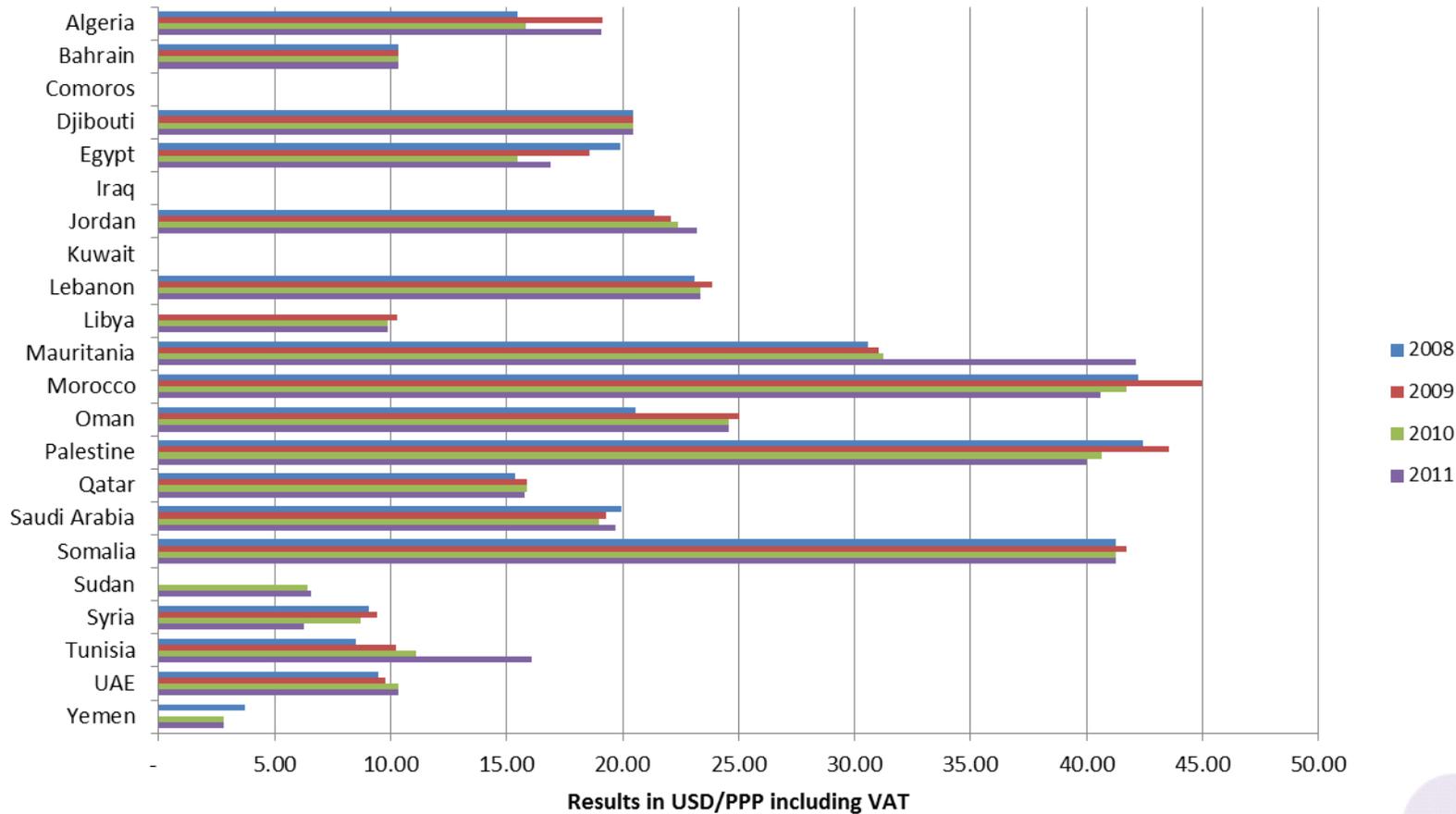


* Countries with gaps in the tariff information are not considered.

PSTN time series analysis (2010 version of OECD baskets)

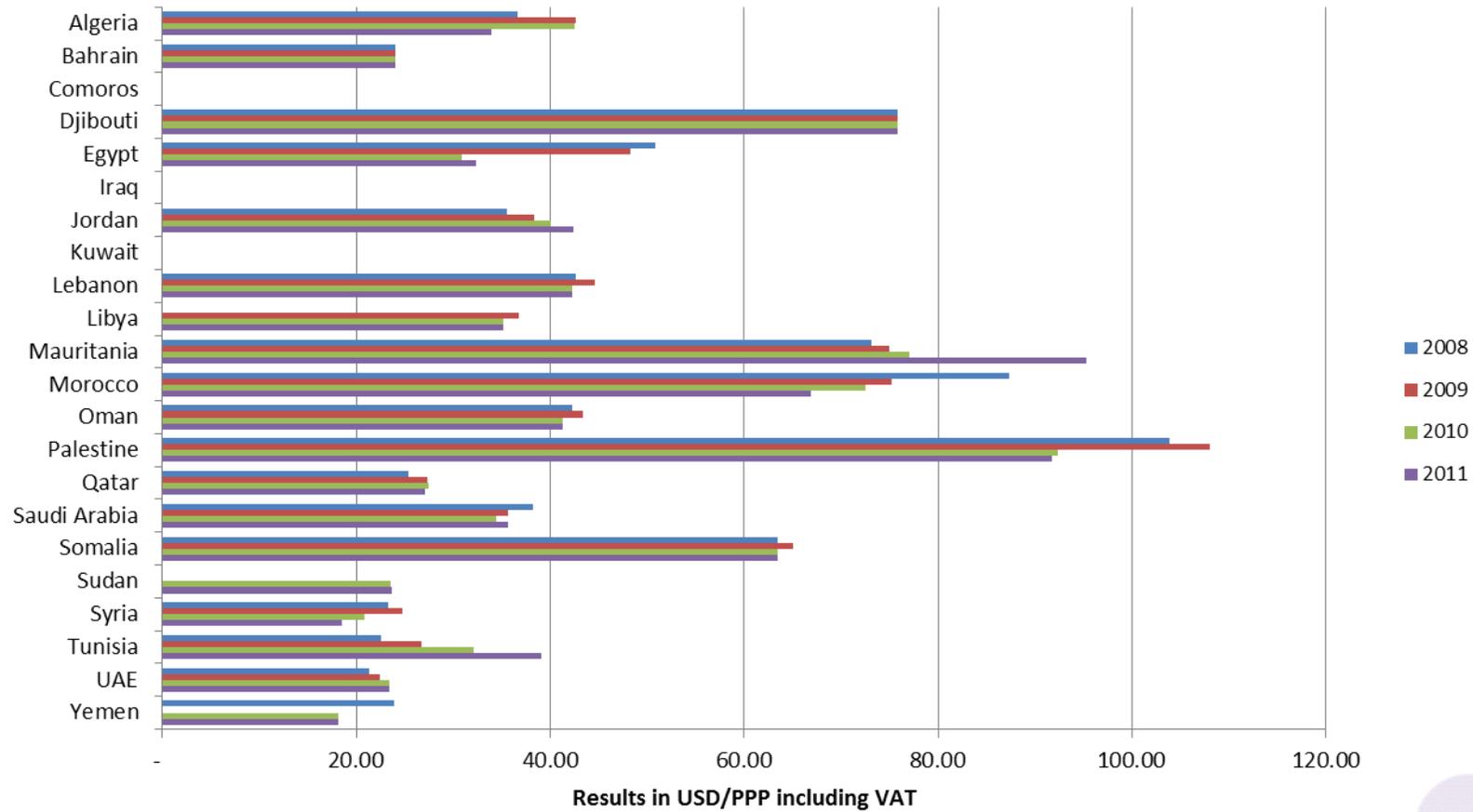
2010 OECD PSTN baskets time series, 20 calls/month, residential

Total results for PSTN OECD 20 calls residential basket Tariffs 2008-2011



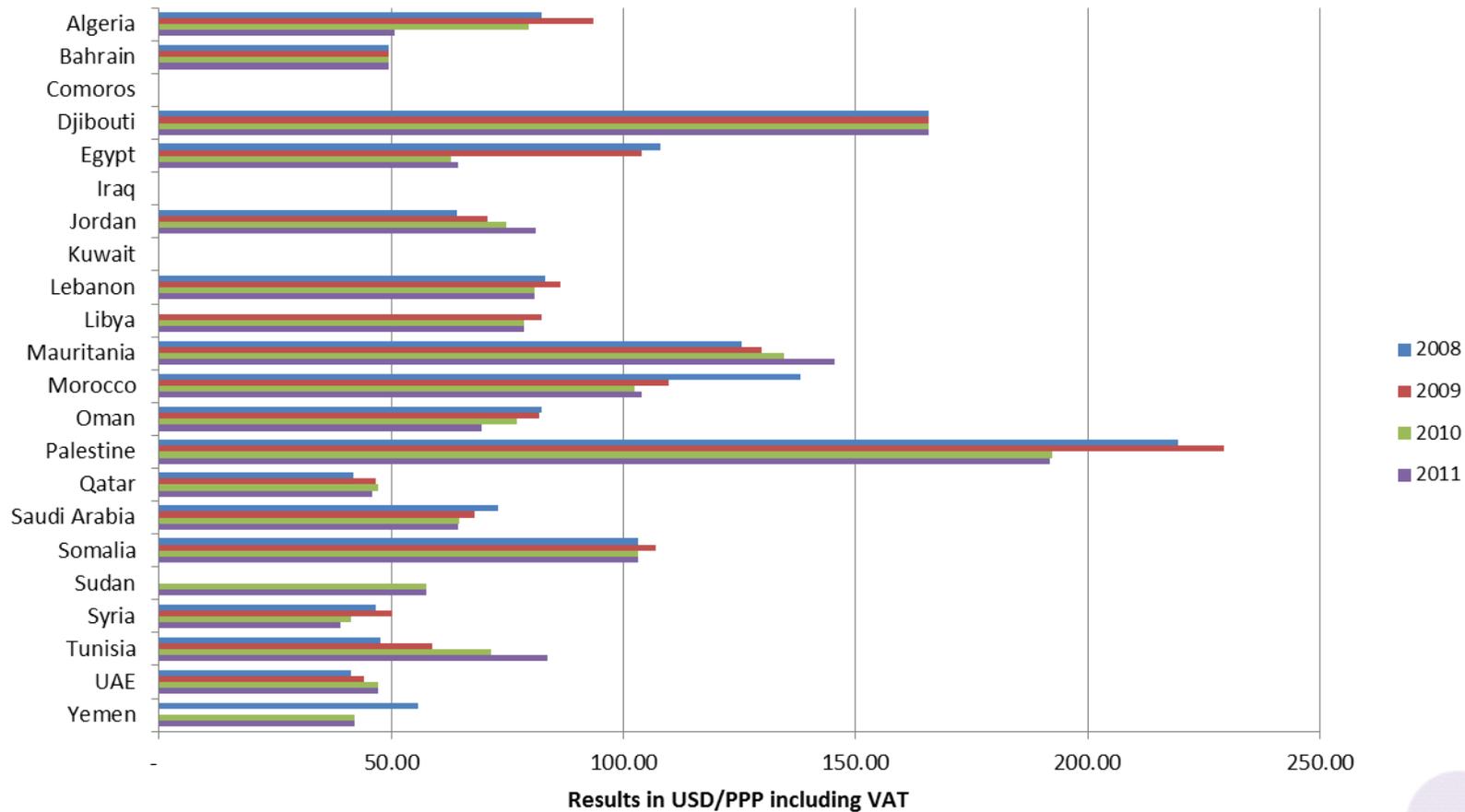
2010 OECD PSTN baskets time series, 60 calls/month, residential

Total results for PSTN OECD 60 calls residential basket Tariffs 2008-2011



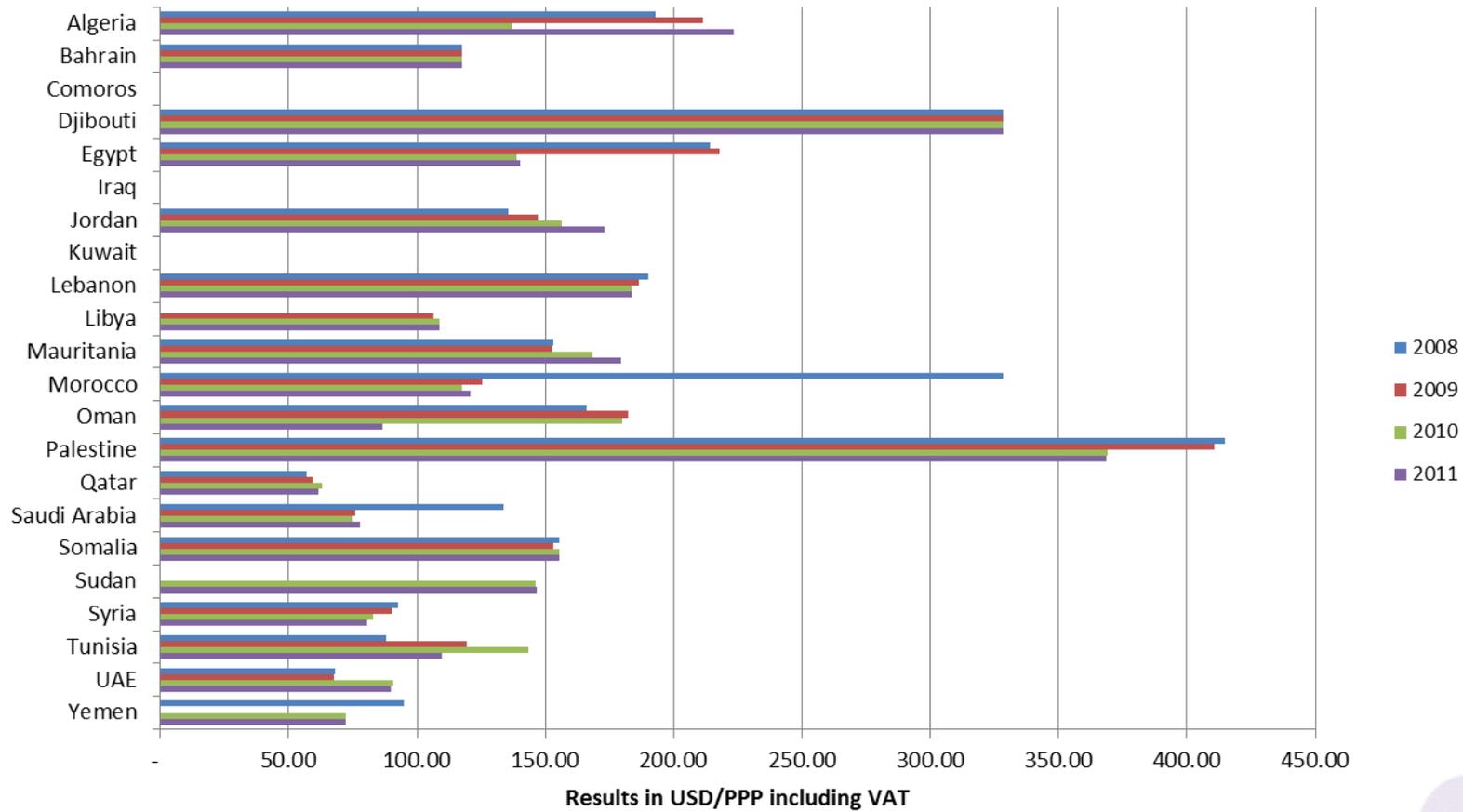
2010 OECD PSTN baskets time series, 140 calls/month, residential

Total results for PSTN OECD 140 calls residential basket Tariffs 2008-2011



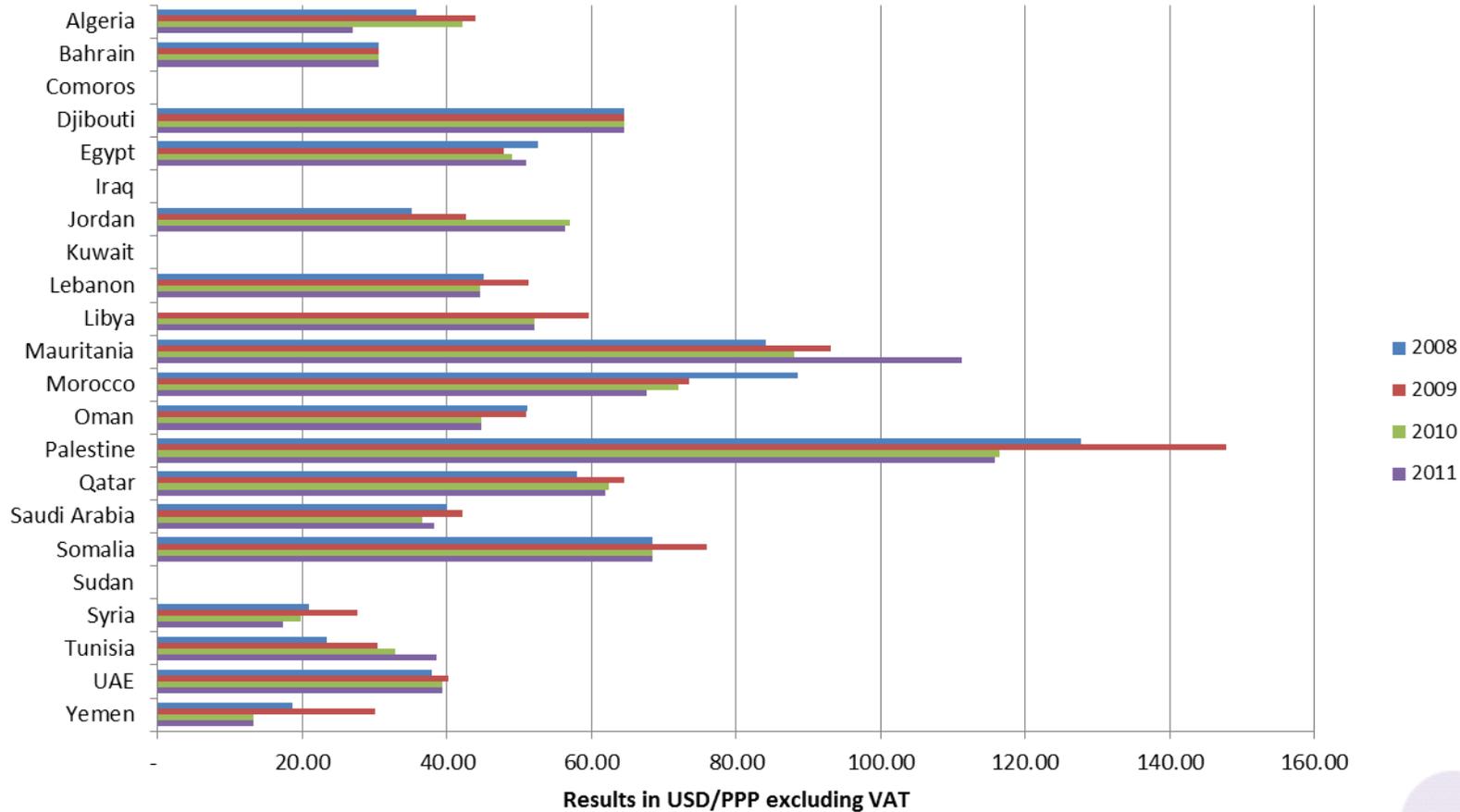
2010 OECD PSTN baskets time series, 420 calls/month, residential

**Total results for PSTN OECD 420 calls residential basket
Tariffs 2008-2011**



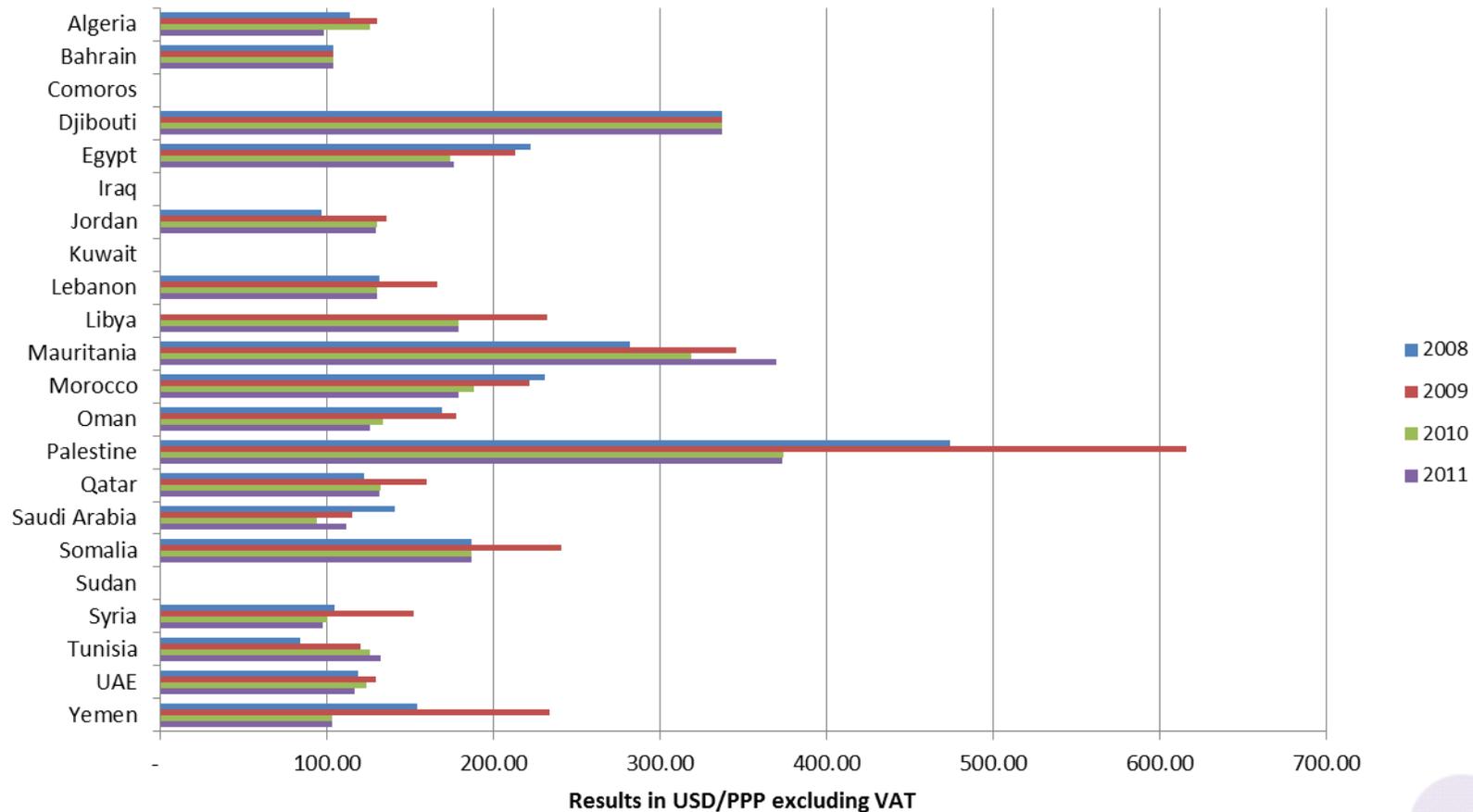
2010 OECD PSTN baskets time series, 100 calls/month, business

Total results for PSTN OECD 100 calls business basket Tariffs 2008-2011



2010 OECD PSTN baskets time series, 260 calls/month, business

Total results for PSTN OECD 260 calls business basket Tariffs 2008-2011



Observations from PSTN time series results

- Price changes 2010 - 2011:
 - Algeria: increased line rental charges, introduced call allowance
 - Egypt: increased connection charges.
 - Jordan: decreased connection charges (business only), increased residential fixed to mobile charges and no off-peak
 - Mauritania: increased line rental charges, increased peak rate fixed to fixed and fixed to mobile charges
 - Morocco: introduced new packages, decreased connection charges for some packages, introduced time sensitive fixed to mobile charges
 - Oman: introduced unlimited national calling package for businesses (replacing usage based packages)
 - Palestine: reduced connection charges
 - Qatar: reduced weekend fixed to mobile call charge
 - Saudi Arabia: increased some fixed to mobile call charges, introduced new pricing options for friends & family and favourite country, plus some minor corrections
 - Sudan: increased connection charge
 - Syria: reduced connection charge
 - Tunisia: increased rental and local/fixed to mobile call charges, introduced new pricing plans
 - UAE: introduced new friends and family and favourite country plans
- While average costs across the baskets have reduced since last year, both for OECD and Arab countries, these have been greater for the higher use baskets. While the reductions have been greater in absolute terms for the Arab countries, as a percentage fall, they are broadly comparable with average reductions in the OECD countries.
- Price changes general
 - In most countries, prices have either remained unchanged or have fallen.
 - Price increases for some users seen in Algeria, Egypt, Jordan, Mauritania and Tunisia.



PSTN ranking tables, 2008-2011

PSTN 20 calls residential basket ranking

Total results for PSTN OECD 20 calls residential basket, tariffs 2008-2011

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	15.46	19.14	15.84	19.10
Bahrain	10.34	10.34	10.34	10.34
Comoros				
Djibouti	20.47	20.47	20.47	20.47
Egypt	19.89	18.58	15.48	16.89
Iraq				
Jordan	21.36	22.10	22.39	23.22
Kuwait				
Lebanon	23.08	23.88	23.33	23.33
Libya		10.30	9.86	9.86
Mauritania	30.60	31.04	31.21	42.12
Morocco	42.21	44.98	41.70	40.59
Oman	20.56	25.02	24.57	24.57
Palestine	42.45	43.53	40.63	39.99
Qatar	15.37	15.86	15.88	15.79
Saudi Arabia	19.97	19.28	18.96	19.70
Somalia	41.24	41.69	41.24	41.24
Sudan			6.40	6.58
Syria	9.04	9.44	8.68	6.28
Tunisia	8.49	10.26	11.08	16.06
UAE	9.49	9.79	10.33	10.33
Yemen				

Arab average	21.88	22.10	20.47	21.47
OECD average	N/A	N/A	24.67	24.32

■ Below Arab average
■ Above Arab average

Ranking for PSTN OECD 20 calls residential basket

	2008	2009	2010	2011
Algeria	5	7	7	8
Bahrain	3	4	4	4
Comoros	-	-	-	-
Djibouti	8	9	10	10
Egypt	6	6	6	7
Iraq	-	-	-	-
Jordan	10	10	11	11
Kuwait	-	-	-	-
Lebanon	11	11	12	12
Libya	-	3	2	2
Mauritania	12	13	14	17
Morocco	14	16	17	15
Oman	9	12	13	13
Palestine	15	15	15	14
Qatar	4	5	8	5
Saudi Arabia	7	8	9	9
Somalia	13	14	16	16
Sudan	-	-	1	1
Syria	-	-	-	-
Tunisia	1	2	5	6
UAE	2	1	3	3
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

The ranking for Syria is not included, as the Syrian result does not include costs for fixed-to-mobile calls, which would return a misleading rank. The monthly prices have been left in for information.

Comparable OECD data is not available for 2008 and 2009



PSTN 60 calls residential basket ranking

Total results for PSTN OECD 60 calls residential basket, tariffs 2008-2011

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	36.61	42.69	42.53	33.93
Bahrain	23.98	23.98	23.98	23.98
Comoros				
Djibouti	75.76	75.76	75.76	75.76
Egypt	50.83	48.31	30.88	32.29
Iraq				
Jordan	35.52	38.38	40.11	42.41
Kuwait				
Lebanon	42.58	44.55	42.28	42.28
Libya		36.73	35.15	35.15
Mauritania	73.16	74.91	77.01	95.30
Morocco	87.27	75.15	72.53	66.91
Oman	42.30	43.40	41.29	41.29
Palestine	103.88	107.96	92.39	91.76
Qatar	25.35	27.34	27.42	27.07
Saudi Arabia	38.20	35.62	34.44	35.66
Somalia	63.46	65.08	63.46	63.46
Sudan			23.52	23.70
Syria	23.28	24.72	20.89	18.48
Tunisia	22.52	26.69	32.07	39.06
UAE	21.29	22.45	23.46	23.46
Yemen				

Arab average	47.88	47.86	44.40	45.11
OECD average	N/A	N/A	37.01	35.10

■ Below Arab average
■ Above Arab average

Ranking for PSTN OECD 60 calls residential basket

	2008	2009	2010	2011
Algeria	6	8	12	6
Bahrain	3	2	3	3
Comoros	-	-	-	-
Djibouti	13	15	15	15
Egypt	10	11	5	5
Iraq	-	-	-	-
Jordan	5	7	9	12
Kuwait	-	-	-	-
Lebanon	9	10	11	11
Libya	-	6	8	7
Mauritania	12	13	16	17
Morocco	14	14	14	14
Oman	8	9	10	10
Palestine	15	16	17	16
Qatar	4	4	4	4
Saudi Arabia	7	5	7	8
Somalia	11	12	13	13
Sudan	-	-	2	2
Syria	-	-	-	-
Tunisia	2	3	6	9
UAE	1	1	1	1
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

The ranking for Syria is not included, as the Syrian result does not include costs for fixed-to-mobile calls, which would return a misleading rank. The monthly prices have been left in for information.

Comparable OECD data is not available for 2008 and 2009



PSTN 140 calls residential basket ranking

Total results for PSTN OECD 140 calls residential basket, tariffs 2008-2011

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	82.38	93.48	79.64	50.77
Bahrain	49.45	49.45	49.45	49.45
Comoros				
Djibouti	165.69	165.69	165.69	165.69
Egypt	108.06	103.83	62.89	64.30
Iraq				
Jordan	64.07	70.69	74.75	81.03
Kuwait				
Lebanon	83.18	86.37	80.78	80.78
Libya		82.43	78.66	78.66
Mauritania	125.46	129.69	134.61	145.50
Morocco	138.00	109.88	102.33	103.92
Oman	82.29	81.96	77.02	69.47
Palestine	219.51	229.30	192.41	191.78
Qatar	41.82	46.77	47.12	45.89
Saudi Arabia	72.99	67.91	64.67	64.34
Somalia	103.05	106.89	103.05	103.05
Sudan			57.46	57.65
Syria	46.75	50.17	41.44	39.03
Tunisia	47.78	58.88	71.38	83.72
UAE	41.38	44.16	47.23	47.23
Yemen				

Arab average	91.99	92.80	85.03	84.57
OECD average	N/A	N/A	59.61	55.96

- Below Arab average
- Above Arab average

Ranking for PSTN OECD 140 calls residential basket

	2008	2009	2010	2011
Algeria	8	10	11	4
Bahrain	4	3	3	3
Comoros	-	-	-	-
Djibouti	14	15	16	16
Egypt	11	11	5	6
Iraq	-	-	-	-
Jordan	5	6	8	11
Kuwait	-	-	-	-
Lebanon	9	9	12	10
Libya	-	8	10	9
Mauritania	12	14	15	15
Morocco	13	13	13	14
Oman	7	7	9	8
Palestine	15	16	17	17
Qatar	2	2	1	1
Saudi Arabia	6	5	6	7
Somalia	10	12	14	13
Sudan	-	-	4	5
Syria	-	-	-	-
Tunisia	3	4	7	12
UAE	1	1	2	2
Yemen	-	-	-	-

- Least expensive
- Most expensive

The ranking for Syria is not included, as the Syrian result does not include costs for fixed-to-mobile calls, which would return a misleading rank. The monthly prices have been left in for information.

Comparable OECD data is not available for 2008 and 2009



PSTN 420 calls residential basket ranking

Total results for PSTN residential OECD 420 calls basket, tariffs 2008-2011

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	192.71	211.23	136.86	223.57
Bahrain	117.32	117.32	117.32	117.32
Comoros				
Djibouti	328.38	328.38	328.38	328.38
Egypt	213.95	217.99	138.88	140.29
Iraq				
Jordan	135.77	146.97	156.49	172.90
Kuwait				
Lebanon	189.91	186.41	183.43	183.43
Libya		106.52	108.85	108.85
Mauritania	153.14	152.49	168.41	179.59
Morocco	328.14	125.44	117.39	120.68
Oman	165.99	182.46	179.74	86.69
Palestine	414.65	410.74	369.15	368.52
Qatar	57.14	59.29	62.79	61.40
Saudi Arabia	133.93	75.94	75.03	77.92
Somalia	155.47	153.09	155.47	155.47
Sudan			146.32	146.50
Syria	92.48	90.17	83.04	80.63
Tunisia	87.82	119.60	143.29	109.50
UAE	68.17	67.68	90.51	89.74
Yemen				

Arab average	177.18	161.87	153.41	152.85
OECD average	N/A	N/A	101.78	89.15

■ Below Arab average
■ Above Arab average

The ranking for Syria is not included, as the Syrian result does not include costs for fixed-to-mobile calls, which would return a misleading rank. The monthly prices have been left in for information.

Comparable OECD data is not available for 2008 and 2009

Ranking for PSTN OECD 420 calls residential basket

	2008	2009	2010	2011
Algeria	11	13	7	15
Bahrain	4	5	5	7
Comoros	-	-	-	-
Djibouti	14	15	16	16
Egypt	12	14	8	9
Iraq	-	-	-	-
Jordan	6	8	12	12
Kuwait	-	-	-	-
Lebanon	10	12	15	14
Libya	-	4	4	5
Mauritania	7	9	13	13
Morocco	13	7	6	8
Oman	9	11	14	3
Palestine	15	16	17	17
Qatar	1	1	1	1
Saudi Arabia	5	3	2	2
Somalia	8	10	11	11
Sudan	-	-	10	10
Syria	-	-	-	-
Tunisia	3	6	9	6
UAE	2	2	3	4
Yemen	-	-	-	-

■ Least expensive
■ Most expensive



PSTN 100 calls business basket ranking

Total results for PSTN OECD 100 calls business basket, tariffs 2008-2011

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria	35.72	43.93	42.11	27.02
Bahrain	30.50	30.50	30.50	30.50
Comoros				
Djibouti	64.49	64.49	64.49	64.49
Egypt	52.53	47.93	49.07	50.94
Iraq				
Jordan	35.18	42.61	56.99	56.34
Kuwait				
Lebanon	45.07	51.33	44.60	44.60
Libya		59.60	52.14	52.14
Mauritania	84.10	93.08	88.08	111.24
Morocco	88.53	73.47	72.00	67.58
Oman	51.10	50.96	44.73	44.73
Palestine	127.73	147.77	116.45	115.82
Qatar	57.92	64.58	62.34	61.92
Saudi Arabia	40.02	42.22	36.55	38.22
Somalia	68.40	76.01	68.40	68.40
Sudan				
Syria	20.95	27.67	19.77	17.37
Tunisia	23.34	30.42	32.82	38.63
UAE	37.85	40.26	39.37	39.37
Yemen				

Arab average	53.96	58.05	54.14	54.66
OECD average	N/A	N/A	41.78	39.69

■ Below Arab average
■ Above Arab average

Ranking for PSTN OECD 100 calls business basket

	2008	2009	2010	2011
Algeria	4	6	5	1
Bahrain	2	2	1	2
Comoros	-	-	-	-
Djibouti	11	11	12	12
Egypt	9	7	8	8
Iraq	-	-	-	-
Jordan	3	5	10	10
Kuwait	-	-	-	-
Lebanon	7	9	6	6
Libya	-	10	9	9
Mauritania	13	15	15	15
Morocco	14	13	14	13
Oman	8	8	7	7
Palestine	15	16	16	16
Qatar	10	12	11	11
Saudi Arabia	6	4	3	3
Somalia	12	14	13	14
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	1	1	2	4
UAE	5	3	4	5
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

The ranking for Syria is not included, as the Syrian result does not include costs for fixed-to-mobile calls, which would return a misleading rank. The monthly prices have been left in for information.

Comparable OECD data is not available for 2008 and 2009



PSTN 260 calls business basket ranking

Total results for PSTN OECD 260 calls business basket, tariffs 2008-2011

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria	113.83	130.30	125.61	98.09
Bahrain	103.66	103.66	103.66	103.66
Comoros				
Djibouti	336.87	336.87	336.87	336.87
Egypt	222.01	212.68	173.92	175.80
Iraq				
Jordan	96.86	135.44	129.79	129.14
Kuwait				
Lebanon	131.42	165.96	129.96	129.96
Libya		231.77	179.08	179.08
Mauritania	282.09	345.61	318.56	369.73
Morocco	230.59	221.16	188.13	178.87
Oman	168.86	177.53	133.32	126.01
Palestine	474.28	615.90	373.84	373.21
Qatar	122.49	160.09	132.38	131.61
Saudi Arabia	140.73	115.05	94.05	111.35
Somalia	186.87	240.62	186.87	186.87
Sudan				
Syria	104.76	152.20	99.91	97.51
Tunisia	83.52	119.93	125.82	132.19
UAE	118.38	129.41	123.71	116.17
Yemen				

Arab average	182.33	211.42	173.85	175.06
OECD average	N/A	N/A	86.49	80.33

■ Below Arab average
■ Above Arab average

Ranking for PSTN OECD 260 calls business basket

	2008	2009	2010	2011
Algeria	4	5	4	1
Bahrain	3	1	2	2
Comoros	-	-	-	-
Djibouti	14	14	15	14
Egypt	11	10	10	10
Iraq	-	-	-	-
Jordan	2	6	6	6
Kuwait	-	-	-	-
Lebanon	7	8	7	7
Libya	-	12	11	12
Mauritania	13	15	14	15
Morocco	12	11	13	11
Oman	9	9	9	5
Palestine	15	16	16	16
Qatar	6	7	8	8
Saudi Arabia	8	2	1	3
Somalia	10	13	12	13
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	1	3	5	9
UAE	5	4	3	4
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

The ranking for Syria is not included, as the Syrian result does not include costs for fixed-to-mobile calls, which would return a misleading rank. The monthly prices have been left in for information. Comparable OECD data is not available for 2008 and 2009



Mobile basket 2011 results (2010 version of OECD baskets)

Mobile tariff data issues

- Tariff data was researched from operator websites in March 2011.
 - Additional clarifications have been sought from the operators and regulators.
 - Regulators have been offered the opportunity to comment on the tariff information.
- No tariff information available for:
 - Djibouti, Somalia
 - Only pre-paid for Libya
 - One operator only for Comoros, Iraq, Mauritania, Palestine and Syria
- Part of tariff information missing for:
 - Kuwait (international call prices for Zain)
- Otherwise the two largest operators are covered for each country
- A total of 383 tariff packages covered for 35 operators in 20 countries
- The OECD results do not include international calls as these are not part of the OECD basket definitions. The “Arab average w/o int'l” line shows the equivalent average without international, based on the Arab basket result, for comparison



OECD mobile baskets 2010

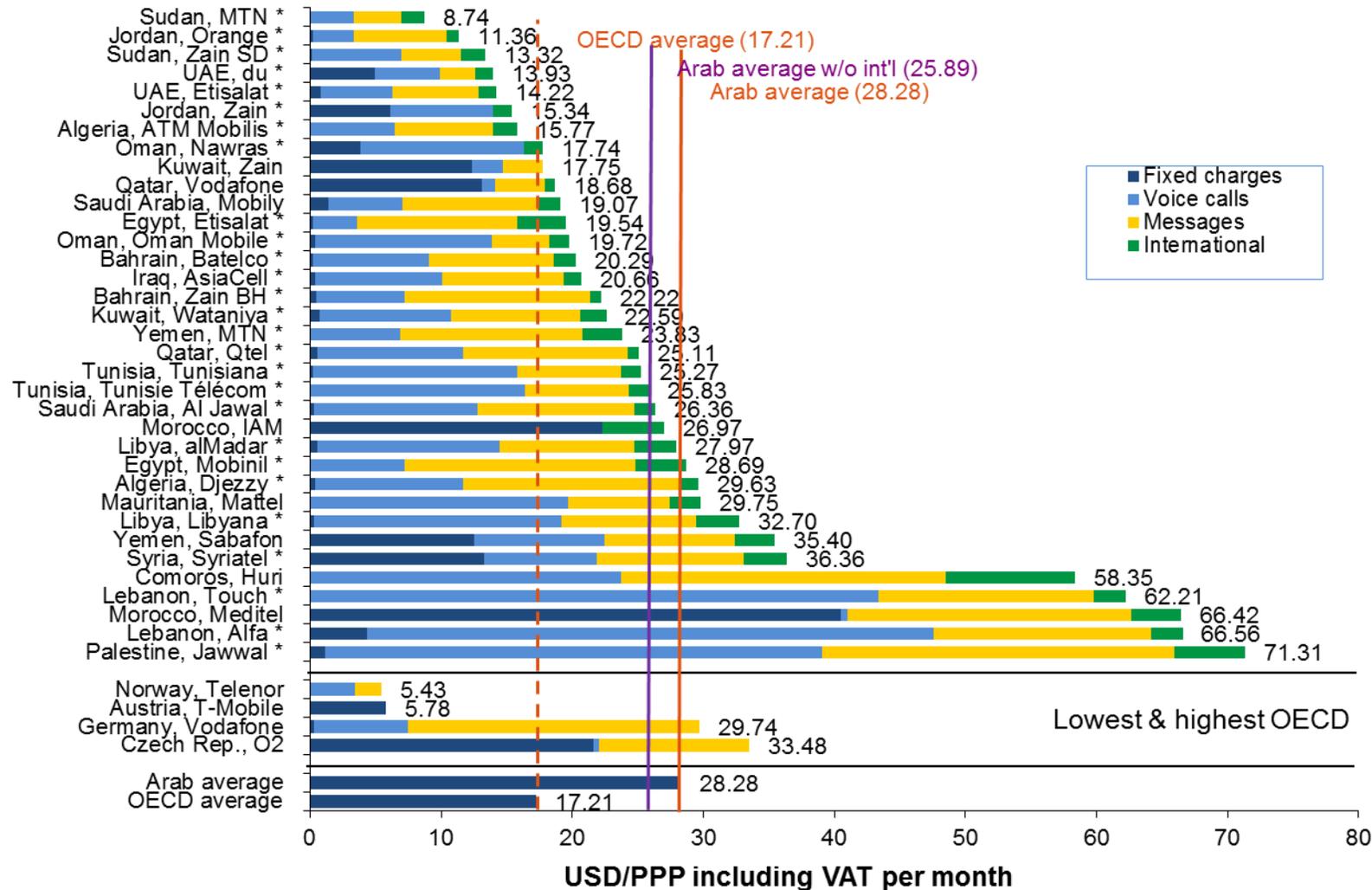
- The OECD adopted new baskets for mobile in March 2010. The key information about the basket definitions is shown below.
 - The following 6 pages show the results using the new basket definitions
 - Tariff information used is the same as for previous results
 - New baskets include a new way of calculating call costs, and also include the capability to cover “Selective discounts”
 - Pre- and Post-paid tariffs are included for all baskets

Volume per month	Total calls per month	Call distribution				SMS
		Mobile to fixed	On-net	Off-net	Voicemail	
30 calls basket	30	16%	55%	25%	4%	100
100 calls basket	100	17%	52%	28%	3%	140
300 calls basket	300	14%	46%	37%	3%	225
900 calls basket	900	14%	55%	28%	3%	350
40 calls prepaid basket	40	14%	64%	18%	4%	60
400 messages basket	8	8%	55%	25%	12%	400



2010 OECD mobile basket: 30 calls/month

Mobile voice OECD 30 calls basket
Tariffs as of March 2011



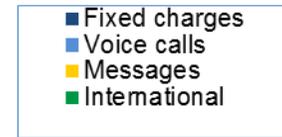
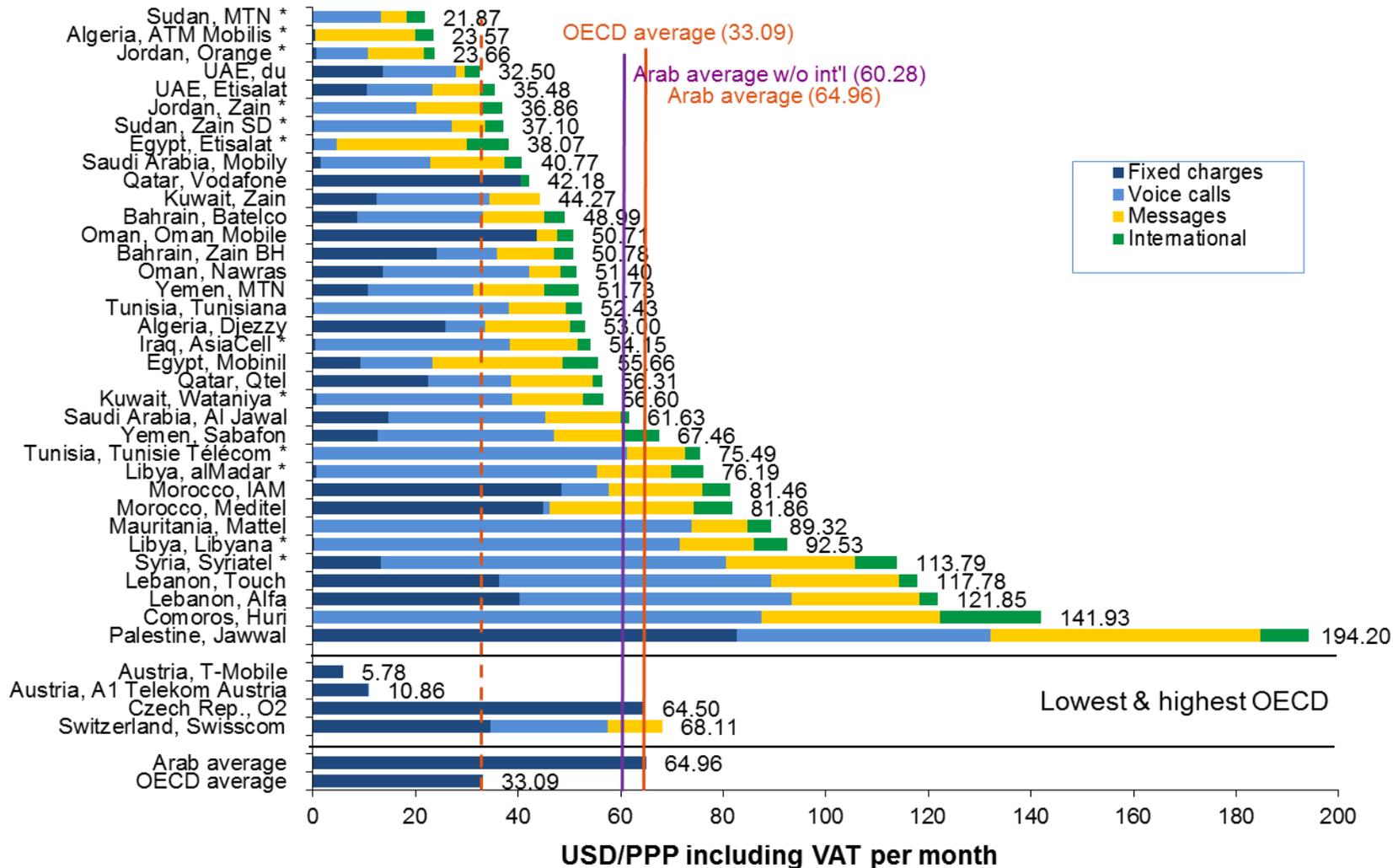
Please note:
No data for Djibouti and Somalia.
No international data for Zain, Kuwait.
Selective discounts included.

* marks pre-paid tariffs.



2010 OECD mobile basket 100 calls/month

Mobile voice OECD 100 calls basket
Tariffs as of March 2011

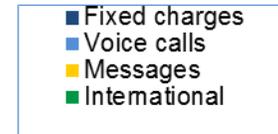
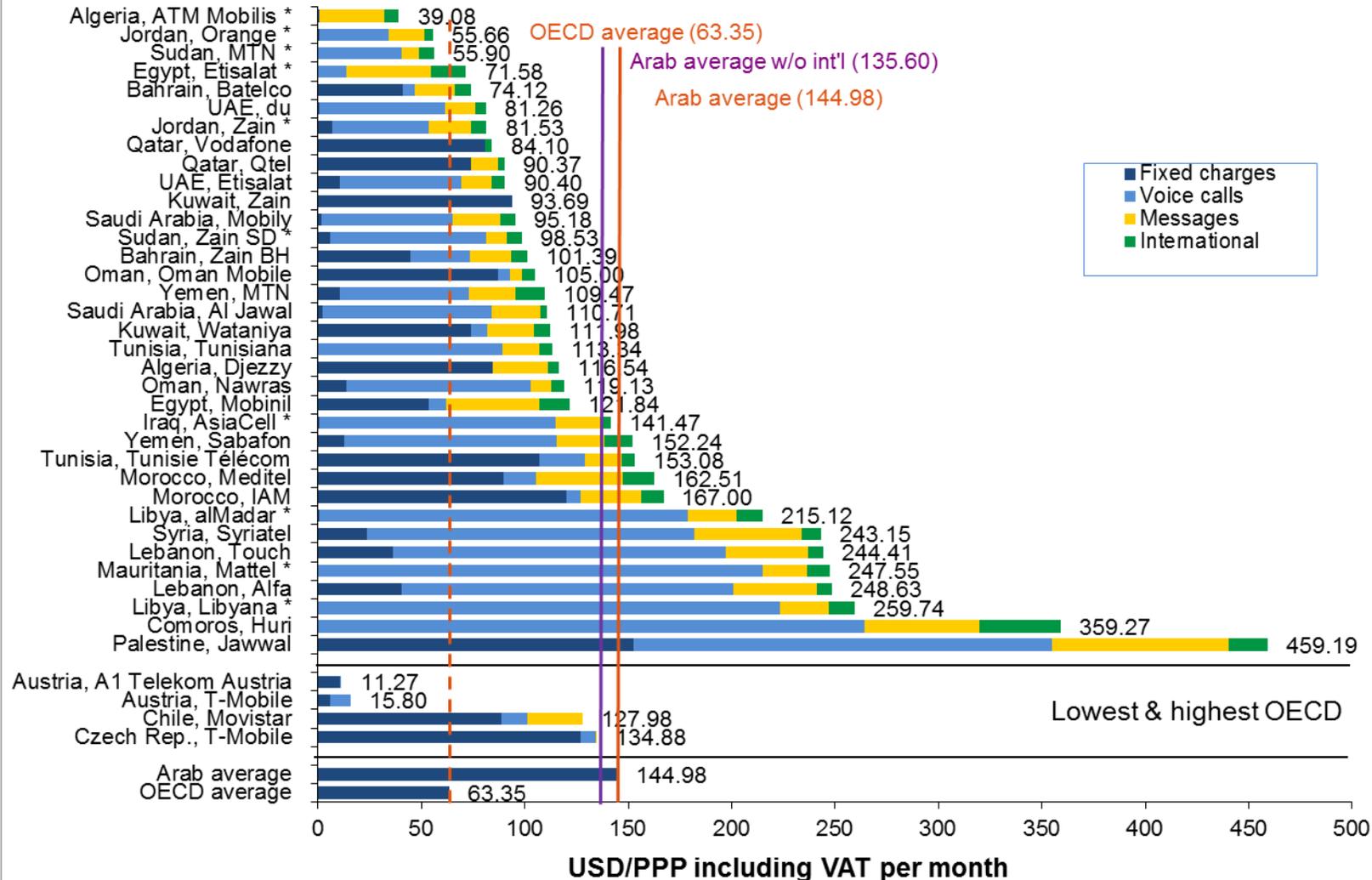


Please note:
No data for Djibouti and Somalia.
No international data for Zain, Kuwait.
Selective discounts included.
* marks pre-paid tariffs.



2010 OECD mobile basket 300 calls/month

Mobile voice OECD 300 calls basket
Tariffs as of March 2011



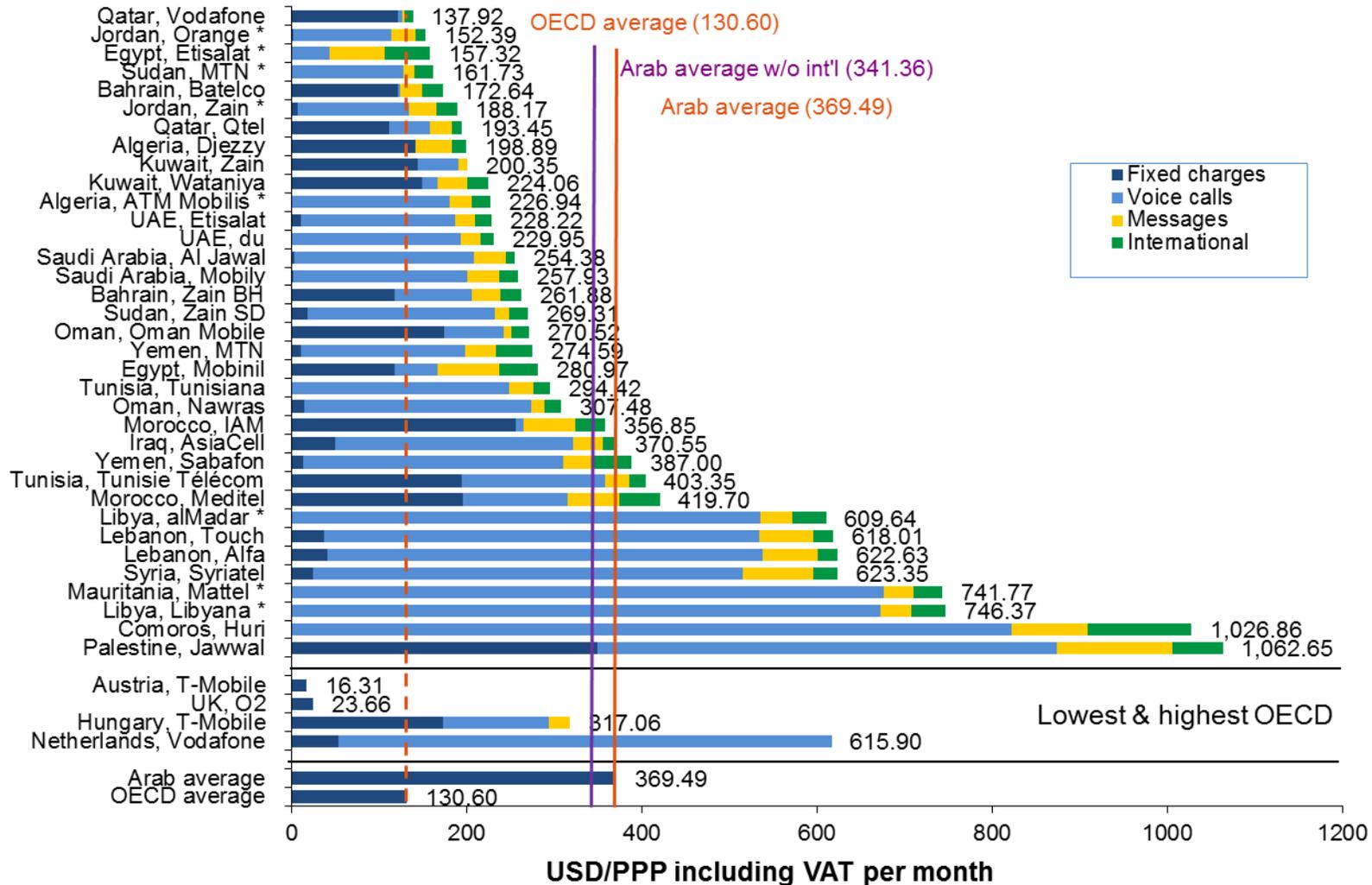
Please note:
No data for Djibouti and Somalia.
No international data for Zain, Kuwait.
Selective discounts included.
* marks pre-paid tariffs.



2010 OECD mobile basket

900 calls/month

Mobile voice OECD 900 calls basket
Tariffs as of March 2011



Please note:
No data for Djibouti and Somalia.
No international data for Zain, Kuwait.
Selective discounts included.

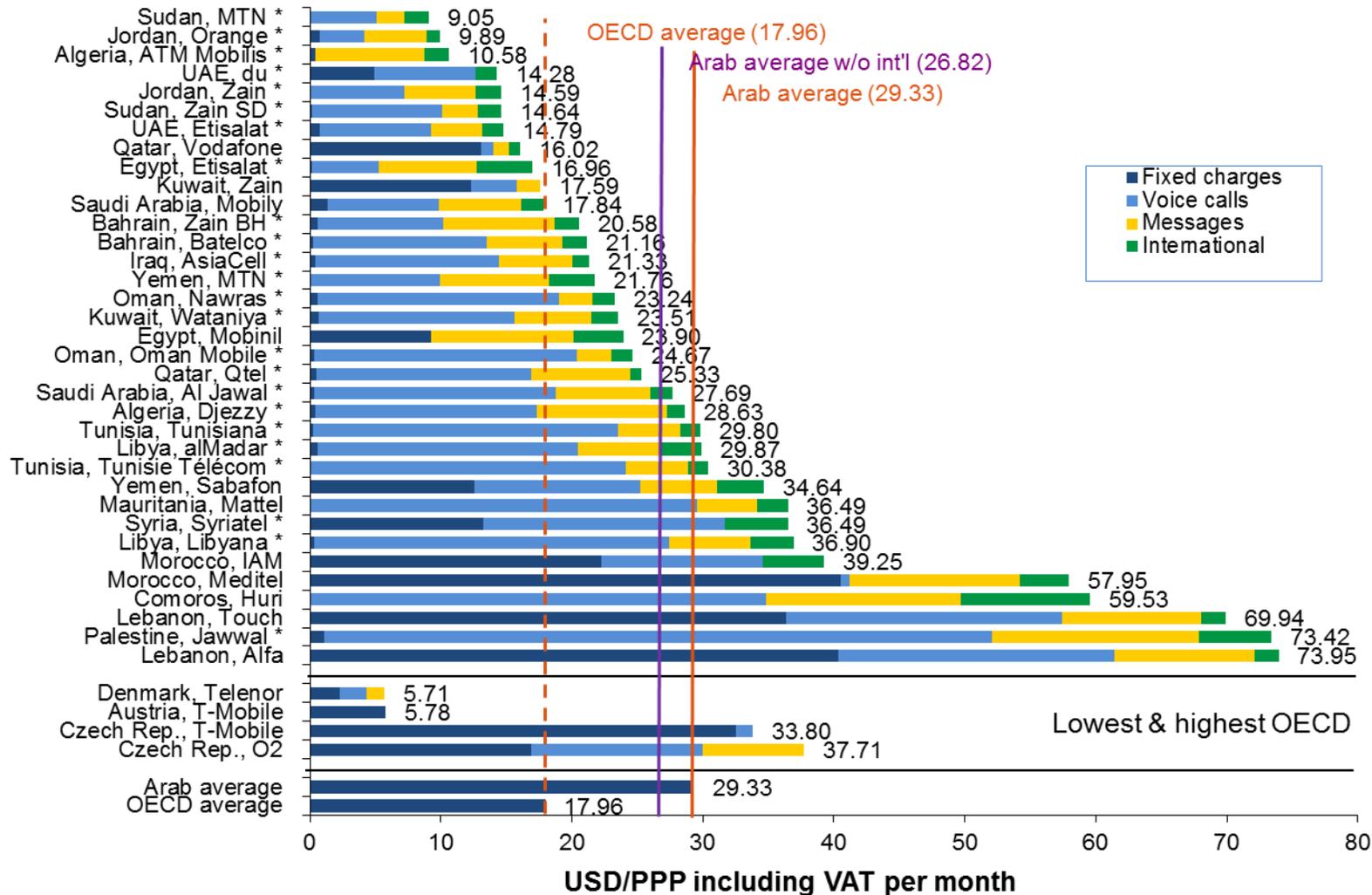
* marks pre-paid tariffs.



2010 OECD mobile basket

40 calls/month prepaid

Mobile voice OECD 40 calls prepaid basket
Tariffs as of March 2011

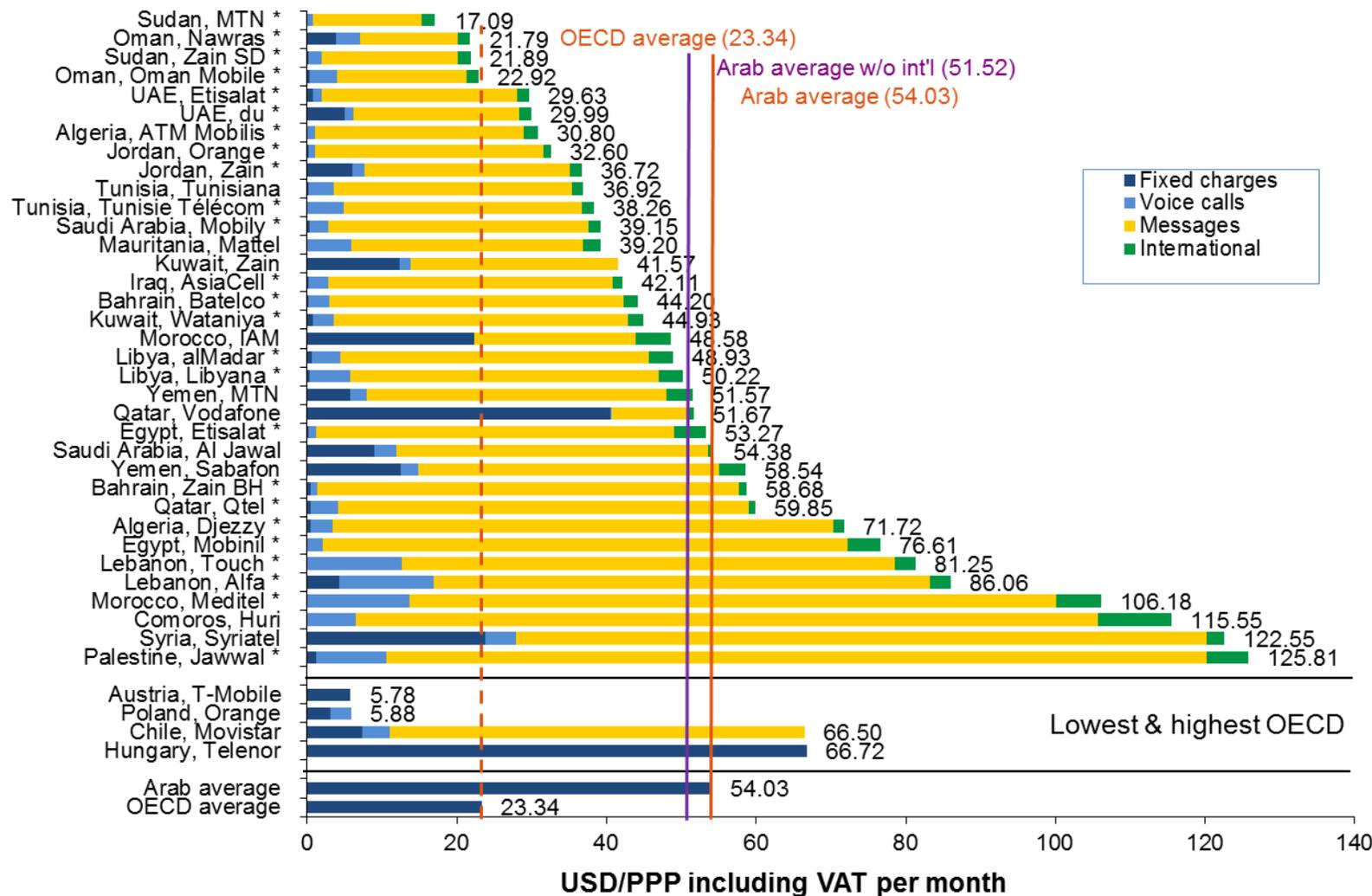


Please note:
No data for Djibouti and Somalia.
No international data for Zain, Kuwait.
Selective discounts included.
* marks pre-paid tariffs.



2010 OECD mobile basket 400 messages/month

Mobile voice OECD 400 messages basket
Tariffs as of March 2011



Please note:
No data for Djibouti and Somalia.
No international data for Zain, Kuwait.
Selective discounts included.

* marks pre-paid tariffs.



Observations from mobile basket results

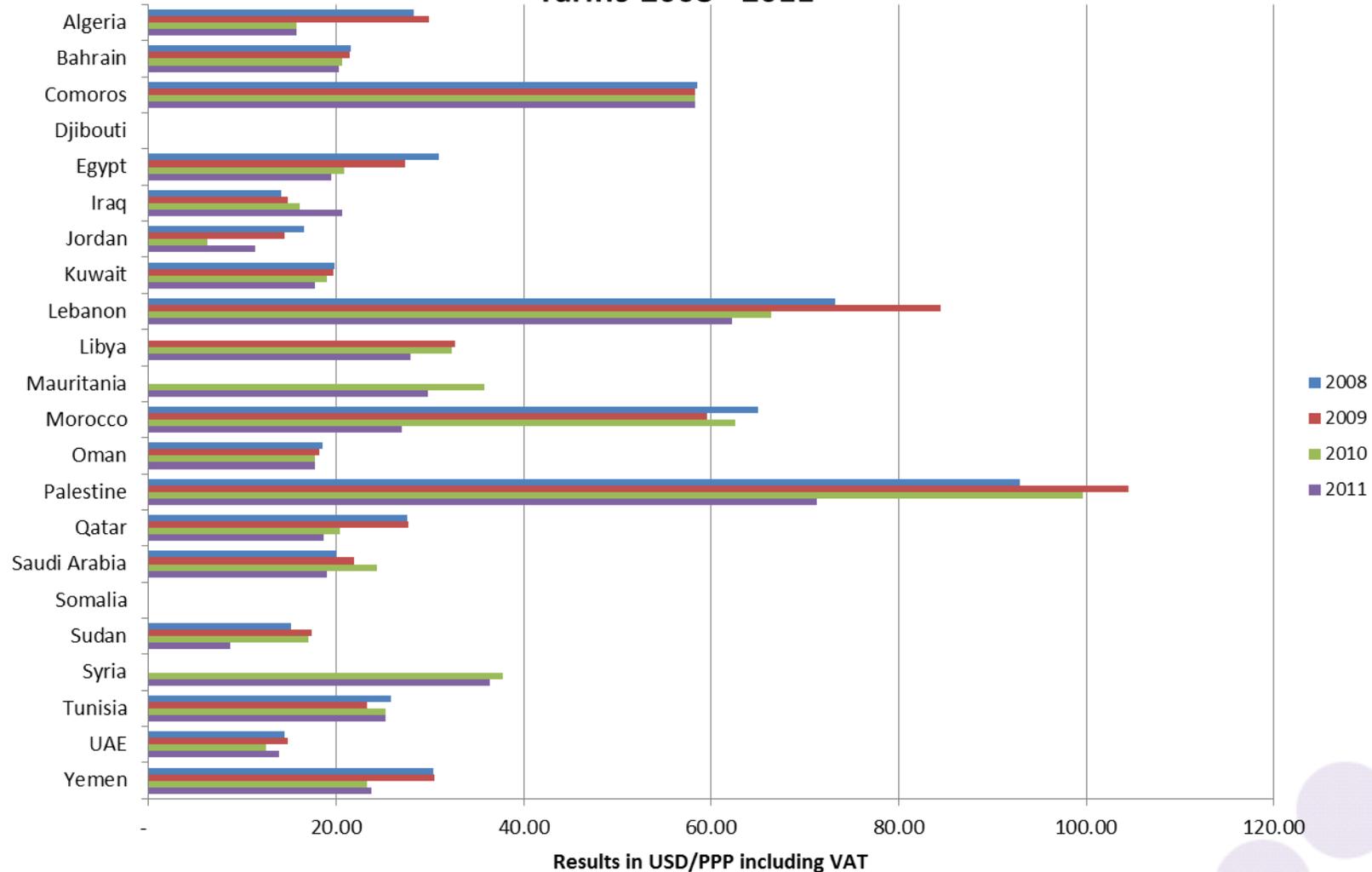
- The cheapest countries throughout are :
 - Jordan, Algeria, Sudan, Egypt and UAE
 - The exact order of these may vary with usage level
 - Jordan and Sudan are among the top 5 for all baskets
 - Only Jordan and UAE were in the top five in 2010
 - Unlike previous years, the cheapest countries for mobile are less likely to have the best PSTN results
- For low usage (the 30 calls basket, 40 calls prepaid basket and 400 messages basket), with pre-paid packages, only a handful of the Arab countries have price levels below the OECD average
- For medium to high usage (the 300 and 900 call baskets, and to a lesser extent, the 100 call basket), with post-paid packages, most Arab countries are above the OECD average
- The average result across all mobile baskets for the Arab countries is almost 100% above the OECD average, which is similar to 2010
- Except for a few of the more expensive carriers and countries, broadly speaking, the Arab countries have relatively uniform price levels for mobile services
- While there has been a relatively modest increase in the number of tariff packages offered by the Arab operators – the average number of packages per operator increased from 7.75 in 2010, to 10.9 in 2011, this is still very low compared to the OECD average of 114 packages per operator



Mobile time series analysis (2010 version of OECD baskets)

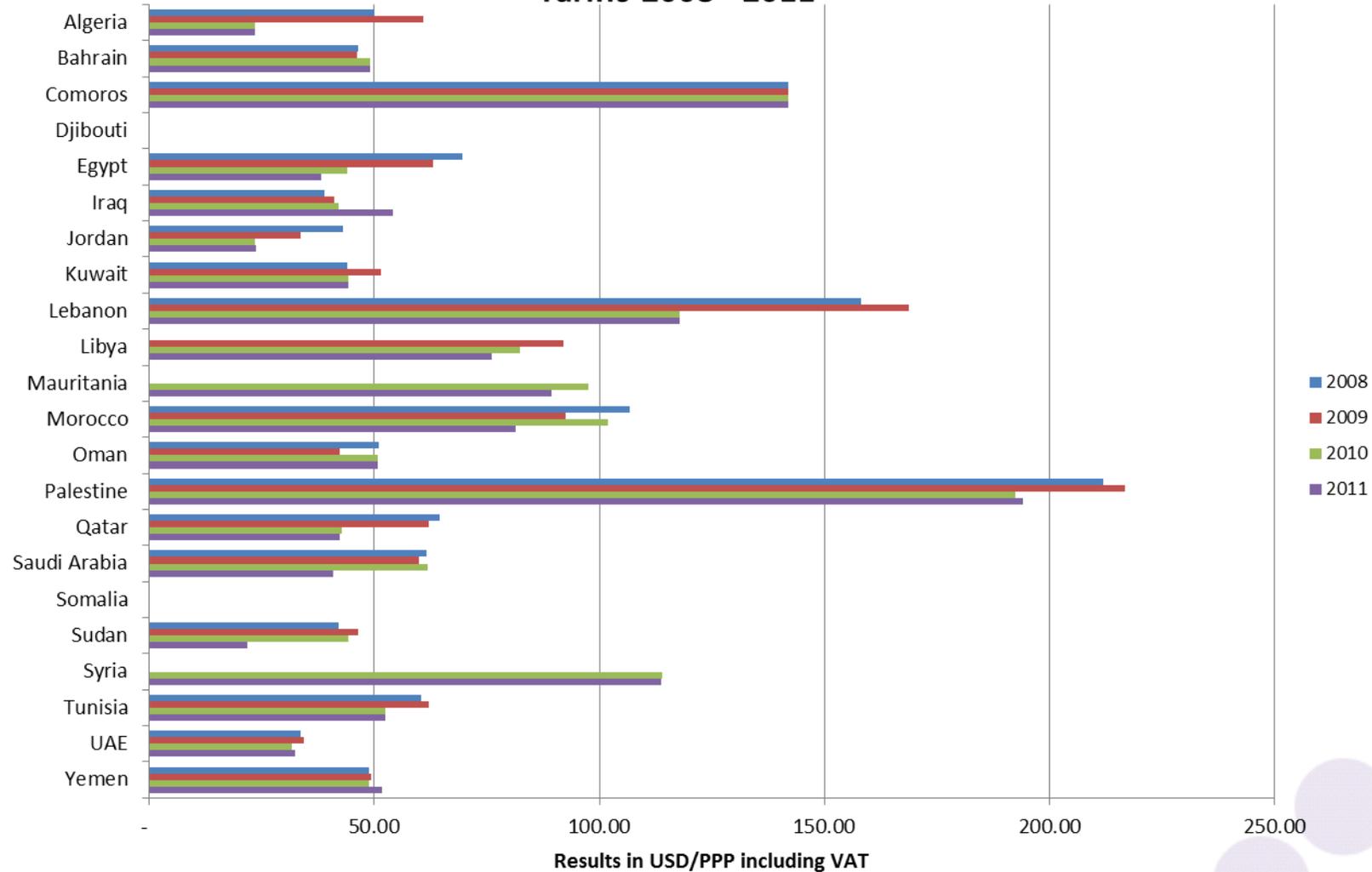
2010 OECD mobile baskets time series, 30 calls/month

**Total results for OECD mobile voice 30 calls basket
Tariffs 2008 - 2011**



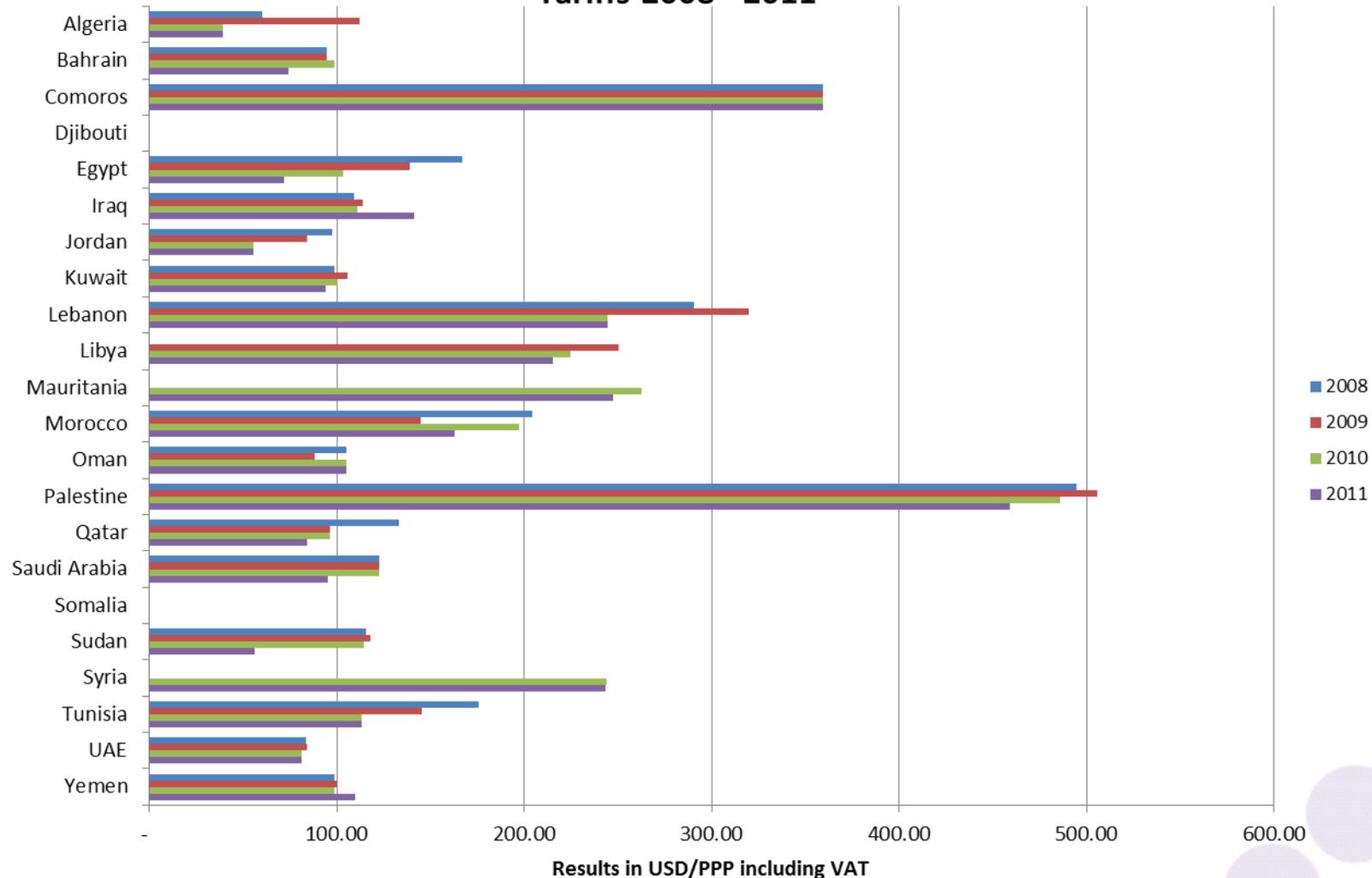
2010 OECD mobile baskets time series, 100 calls/month

**Total results for OECD mobile voice 100 calls basket
Tariffs 2008 - 2011**



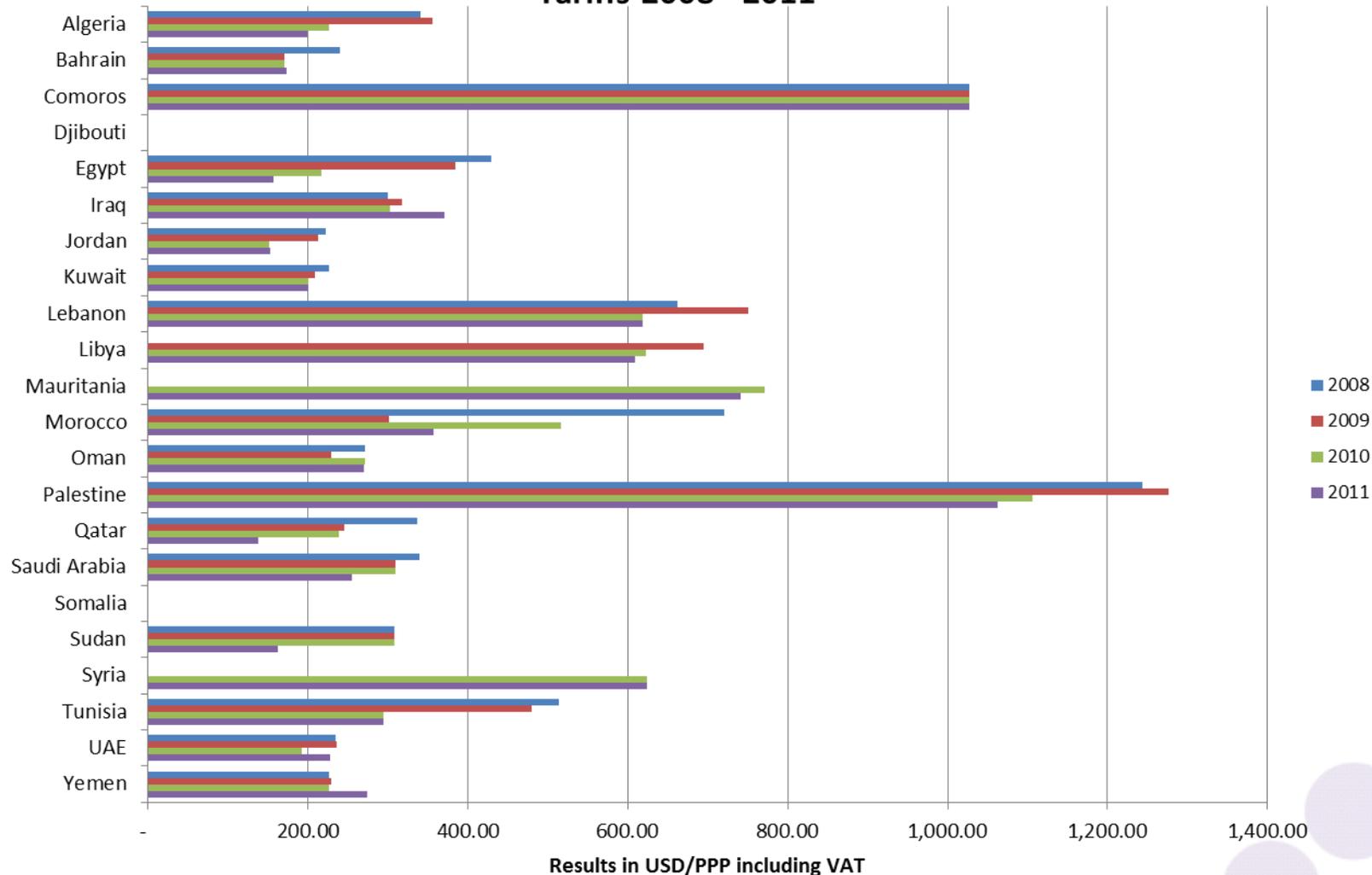
2010 OECD mobile baskets time series, 300 calls/month

**Total results for OECD mobile voice 300 calls basket
Tariffs 2008 - 2011**



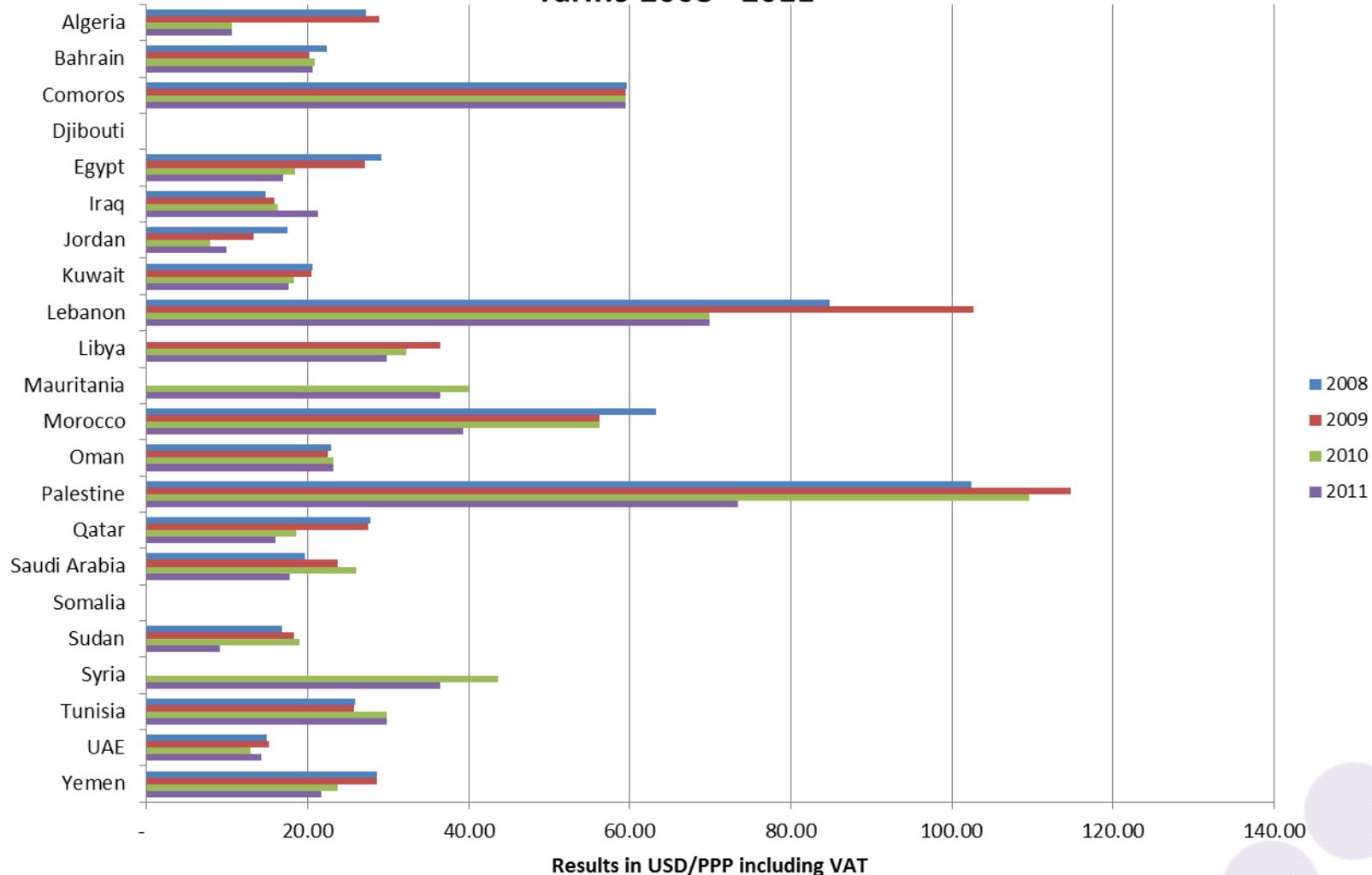
2010 OECD mobile baskets time series, 900 calls/month

**Total results for OECD mobile voice 900 calls basket
Tariffs 2008 - 2011**



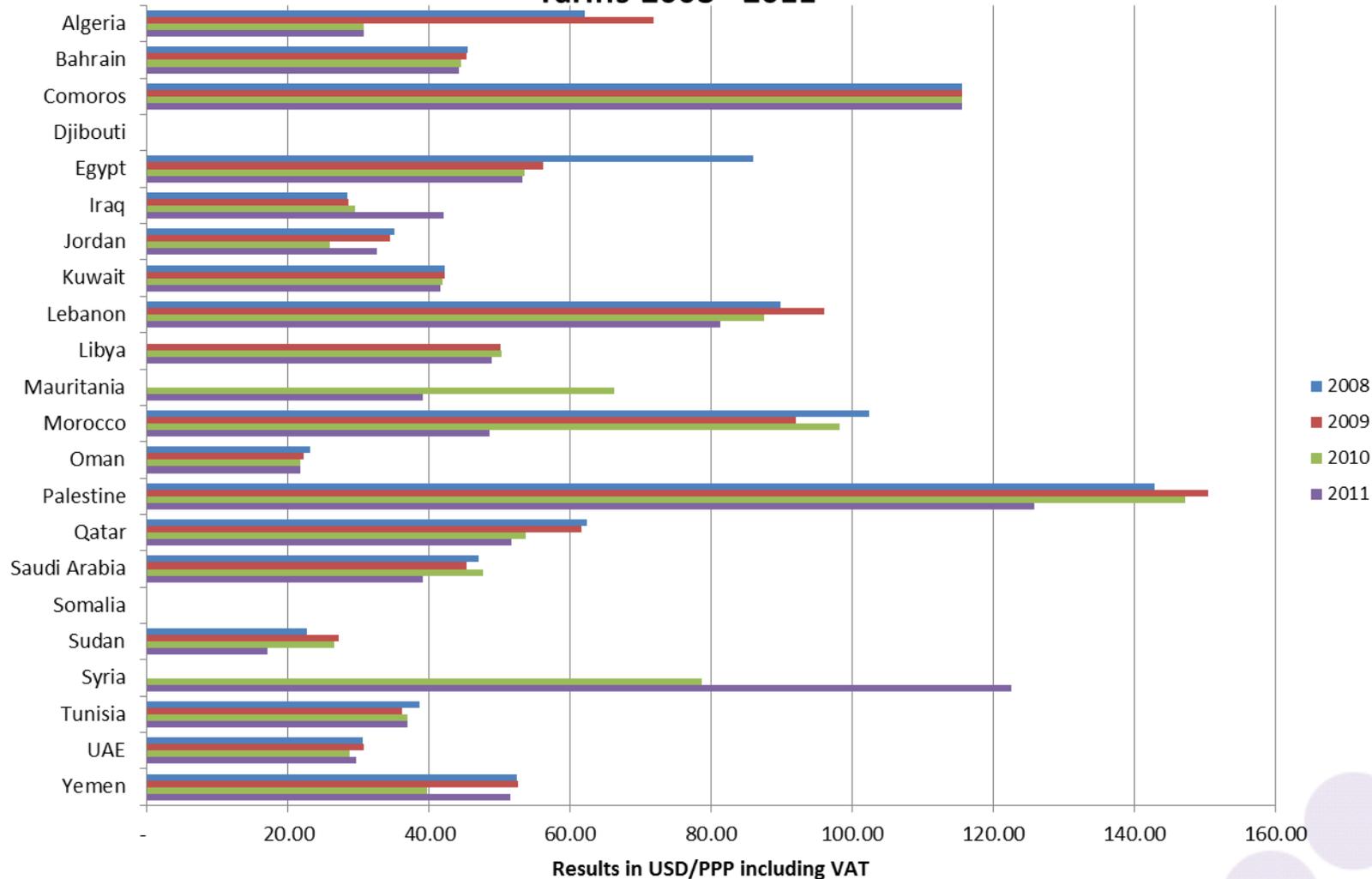
2010 OECD mobile baskets time series, 40 calls/month prepaid

**Total results for OECD mobile voice 40 calls prepaid basket
Tariffs 2008 - 2011**



2010 OECD mobile baskets time series, 400 messages/month

**Total results for OECD mobile voice 400 messages basket
Tariffs 2008 - 2011**



Observations from mobile time series results

- The majority of operators across the Arab countries changed their mobile tariffs.
- While some changes related to increases or decreases in specific tariff components, or changes in the way usage was accounted for, the greatest change was the increase in the number of packages offered.
- Changes affecting the mobile basket results 2010-2011:
 - Algeria: Introduced new packages for residential and business customers
 - Bahrain: introduced new packages, some call charge changes
 - Egypt: changes to inclusive business plans
 - Iraq: change to plans, with alternative billing options, and inclusive allowance. Prices now given in IQD instead of USD
 - Jordan: new packages, including unlimited plans, introduction of new plan options
 - Kuwait: new packages
 - Lebanon: changes to fixed and usage charges
 - Mauritania: package changes
 - Morocco: changes to plans and allowance mapping, and new plans offered
 - Oman: tariff changes and introduction of new plans
 - Palestine: Tariff changes, introduction of a first minute charge, new plans
 - Qatar: Change in plans, including changes in bundled messages, new plans
 - Saudi Arabia: Price changes, including call charge change, new packages
 - Sudan: selective discounts introduced, new packages
 - Syria: connection charge decrease, minimum charge/year increase (prepaid),
 - Tunisia: messaging charge increase
 - UAE: Package changes, price changes
 - Yemen: New packages, pre-paid package change
- While costs in some countries increased over the previous year, most either fell or remained static
- The changes are as a result of a number of factors, such as packages no longer being available, and being replaced by alternative packages, either from the same or other operators, or as a result of a rebalancing of tariff elements in the packages
 - Whilst this resulted in decreases in a number of countries, in others, the basket cost increased
- Although both the Arab and the OECD averages have fallen in the past year, the Arab countries have seen a much more dramatic decrease, particularly for the higher usage baskets.



Mobile ranking tables, 2008-2011

Mobile OECD 30 calls/month basket ranking

Total results for OECD mobile voice 30 calls basket
Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	28.31	29.92	15.77	15.77
Bahrain	21.54	21.43	20.64	20.29
Comoros	58.47	58.35	58.35	58.35
Djibouti				
Egypt	30.94	27.38	20.87	19.54
Iraq	14.21	14.84	16.10	20.66
Jordan	16.62	14.55	6.22	11.36
Kuwait	19.82	19.73	19.02	17.75
Lebanon	73.25	84.46	66.41	62.21
Libya		32.66	32.35	27.97
Mauritania			35.87	29.75
Morocco	64.98	59.58	62.56	26.97
Oman	18.61	18.19	17.76	17.74
Palestine	92.89	104.54	99.64	71.31
Qatar	27.61	27.76	20.46	18.68
Saudi Arabia	20.07	21.95	24.35	19.07
Somalia				
Sudan	15.23	17.41	17.09	8.74
Syria			37.83	36.36
Tunisia	25.88	23.35	25.27	25.27
UAE	14.53	14.85	12.57	13.93
Yemen	30.37	30.49	23.35	23.83

Arab average	33.73	34.52	31.62	27.28
OECD average	N/A	N/A	16.64	14.99

■ Below Arab average
■ Above Arab average

Ranking for OECD mobile 30 calls basket

	2008	2009	2010	2011
Algeria	11	12	3	4
Bahrain	8	7	9	10
Comoros	14	15	17	18
Djibouti	-	-	-	-
Egypt	13	10	10	9
Iraq	1	2	4	11
Jordan	4	1	1	2
Kuwait	6	6	7	6
Lebanon	16	17	19	19
Libya	-	14	14	15
Mauritania	-	-	15	16
Morocco	15	16	18	14
Oman	5	5	6	5
Palestine	17	18	20	20
Qatar	10	11	8	7
Saudi Arabia	7	8	12	8
Somalia	-	-	-	-
Sudan	3	4	5	1
Syria	-	-	16	17
Tunisia	9	9	13	13
UAE	2	3	2	3
Yemen	12	13	11	12

■ Least expensive
■ Most expensive

Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries
Comparable OECD data is not available for 2008 and 2009



Mobile OECD 100 calls/month basket ranking

Total results for OECD mobile voice 100 calls basket
Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	50.04	60.93	23.57	23.57
Bahrain	46.27	46.20	48.99	48.99
Comoros	142.05	141.93	141.93	141.93
Djibouti				
Egypt	69.67	62.98	44.03	38.07
Iraq	38.96	41.17	42.06	54.15
Jordan	42.97	33.56	23.37	23.66
Kuwait	44.09	51.39	44.27	44.27
Lebanon	158.19	168.67	117.78	117.78
Libya		92.03	82.33	76.19
Mauritania			97.66	89.32
Morocco	106.83	92.38	101.83	81.46
Oman	50.88	42.21	50.84	50.71
Palestine	211.83	216.69	192.41	194.20
Qatar	64.59	61.96	42.72	42.18
Saudi Arabia	61.62	59.84	61.88	40.77
Somalia				
Sudan	42.02	46.30	44.12	21.87
Syria			113.91	113.79
Tunisia	60.41	62.08	52.43	52.43
UAE	33.60	34.22	31.65	32.50
Yemen	48.92	49.28	48.78	51.73

Arab average	74.88	75.77	70.33	66.98
OECD average	N/A	N/A	31.60	27.78

■ Below Arab average
■ Above Arab average

Ranking for OECD mobile 100 calls basket

	2008	2009	2010	2011
Algeria	8	10	2	2
Bahrain	6	5	10	9
Comoros	15	16	19	19
Djibouti	-	-	-	-
Egypt	13	13	6	5
Iraq	2	3	4	13
Jordan	4	1	1	3
Kuwait	5	8	8	8
Lebanon	16	17	18	18
Libya	-	14	14	14
Mauritania	-	-	15	16
Morocco	14	15	16	15
Oman	9	4	11	10
Palestine	17	18	20	20
Qatar	12	11	5	7
Saudi Arabia	11	9	13	6
Somalia	-	-	-	-
Sudan	3	6	7	1
Syria	-	-	17	17
Tunisia	10	12	12	12
UAE	1	2	3	4
Yemen	7	7	9	11

■ Least expensive
■ Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries
Comparable OECD data is not available for 2008 and 2009

Mobile OECD 300 calls/month basket ranking

Total results for OECD mobile voice 300 calls basket
Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	60.16	111.84	39.08	39.08
Bahrain	94.53	94.47	98.41	74.12
Comoros	359.39	359.27	359.27	359.27
Djibouti				
Egypt	167.03	138.83	103.48	71.58
Iraq	108.88	113.88	110.88	141.47
Jordan	97.59	83.92	55.37	55.66
Kuwait	98.69	105.82	100.65	93.69
Lebanon	290.72	319.54	244.41	244.41
Libya		250.22	224.85	215.12
Mauritania			262.38	247.55
Morocco	204.21	144.51	197.45	162.51
Oman	105.17	88.18	105.13	105.00
Palestine	494.79	505.62	485.93	459.19
Qatar	132.82	96.48	96.27	84.10
Saudi Arabia	122.46	122.42	122.42	95.18
Somalia				
Sudan	115.46	117.76	114.25	55.90
Syria			243.95	243.15
Tunisia	175.48	145.48	113.34	113.34
UAE	83.50	84.12	81.26	81.26
Yemen	98.70	99.53	98.56	109.47

Arab average	165.27	165.66	162.87	152.55
OECD average	N/A	N/A	63.91	55.87

■ Below Arab average
■ Above Arab average

Ranking for OECD mobile 300 calls basket

	2008	2009	2010	2011
Algeria	1	8	1	1
Bahrain	3	4	5	5
Comoros	16	17	19	19
Djibouti	-	-	-	-
Egypt	12	12	8	4
Iraq	8	9	10	13
Jordan	4	1	2	2
Kuwait	5	7	7	8
Lebanon	15	16	17	17
Libya	-	15	15	15
Mauritania	-	-	18	18
Morocco	14	13	14	14
Oman	7	3	9	10
Palestine	17	18	20	20
Qatar	11	5	4	7
Saudi Arabia	10	11	13	9
Somalia	-	-	-	-
Sudan	9	10	12	3
Syria	-	-	16	16
Tunisia	13	14	11	12
UAE	2	2	3	6
Yemen	6	6	6	11

■ Least expensive
■ Most expensive

Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries
Comparable OECD data is not available for 2008 and 2009



Mobile OECD 900 calls/month basket ranking

Total results for OECD mobile voice 900 calls basket
Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	340.19	356.33	226.94	198.89
Bahrain	239.62	170.80	170.24	172.64
Comoros	1,026.98	1,026.86	1,026.86	1,026.86
Djibouti				
Egypt	429.54	384.45	216.17	157.32
Iraq	299.69	317.78	303.02	370.55
Jordan	222.50	212.26	152.10	152.39
Kuwait	225.87	209.19	200.35	200.35
Lebanon	662.65	750.28	618.01	618.01
Libya		694.52	622.06	609.64
Mauritania			771.30	741.77
Morocco	720.65	300.63	516.04	356.85
Oman	270.68	229.27	270.66	270.52
Palestine	1,244.12	1,276.88	1,105.61	1,062.65
Qatar	336.58	245.67	238.18	137.92
Saudi Arabia	339.98	309.97	309.97	254.38
Somalia				
Sudan	307.85	307.82	307.82	161.73
Syria			624.15	623.35
Tunisia	513.09	479.79	294.42	294.42
UAE	235.19	235.80	191.80	228.22
Yemen	226.72	229.50	226.58	274.59

Arab average	449.52	429.88	419.61	395.65
OECD average	N/A	N/A	132.20	107.81

■ Below Arab average
■ Above Arab average

Ranking for OECD mobile 900 calls basket

	2008	2009	2010	2011
Algeria	11	12	7	6
Bahrain	5	1	2	5
Comoros	16	17	19	19
Djibouti	-	-	-	-
Egypt	12	13	5	3
Iraq	7	11	11	14
Jordan	1	3	1	2
Kuwait	2	2	4	7
Lebanon	14	16	15	16
Libya	-	15	16	15
Mauritania	-	-	18	18
Morocco	15	8	14	13
Oman	6	4	9	10
Palestine	17	18	20	20
Qatar	9	7	8	1
Saudi Arabia	10	10	13	9
Somalia	-	-	-	-
Sudan	8	9	12	4
Syria	-	-	17	17
Tunisia	13	14	10	12
UAE	4	6	3	8
Yemen	3	5	6	11

■ Least expensive
■ Most expensive



Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries
 Comparable OECD data is not available for 2008 and 2009

Mobile OECD 40 calls/month prepaid basket ranking

Total results for OECD mobile voice 40 calls prepaid basket
Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	27.30	28.92	10.58	10.58
Bahrain	22.36	20.19	20.89	20.58
Comoros	59.66	59.53	59.53	59.53
Djibouti				
Egypt	29.10	27.11	18.42	16.96
Iraq	14.76	15.84	16.28	21.33
Jordan	17.56	13.24	7.95	9.89
Kuwait	20.60	20.51	18.25	17.59
Lebanon	84.84	102.69	69.94	69.94
Libya		36.44		29.87
Mauritania			39.97	36.49
Morocco	63.26	56.18	56.18	39.25
Oman	22.95	22.54	23.25	23.24
Palestine	102.46	114.76	109.58	73.42
Qatar	27.83	27.57	18.64	16.02
Saudi Arabia	19.62	23.72	26.06	17.84
Somalia				
Sudan	16.86	18.28	19.03	9.05
Syria			43.62	36.49
Tunisia	25.88	25.78	29.80	29.80
UAE	14.88	15.18	12.92	14.28
Yemen	28.55	28.66	23.72	21.76

Arab average	35.20	36.51	32.87	28.70
OECD average	N/A	N/A	16.72	15.49

■ Below Arab average
■ Above Arab average

Ranking for OECD mobile 40 calls prepaid basket

	2008	2009	2010	2011
Algeria	10	13	2	3
Bahrain	7	5	9	9
Comoros	14	16	17	18
Djibouti	-	-	-	-
Egypt	13	10	6	6
Iraq	1	3	4	10
Jordan	4	1	1	2
Kuwait	6	6	5	7
Lebanon	16	17	18	19
Libya	-	14	-	14
Mauritania	-	-	14	15
Morocco	15	15	16	17
Oman	8	7	10	12
Palestine	17	18	19	20
Qatar	11	11	7	5
Saudi Arabia	5	8	12	8
Somalia	-	-	-	-
Sudan	3	4	8	1
Syria	-	-	15	16
Tunisia	9	9	13	13
UAE	2	2	3	4
Yemen	12	12	11	11

■ Least expensive
■ Most expensive

Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries
Comparable OECD data is not available for 2008 and 2009



Mobile OECD 400 messages/month basket ranking

Total results for OECD mobile voice 400 messages basket
Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	62.11	71.82	30.80	30.80
Bahrain	45.45	45.33	44.55	44.20
Comoros	115.68	115.55	115.55	115.55
Djibouti				
Egypt	85.91	56.14	53.56	53.27
Iraq	28.47	28.64	29.43	42.11
Jordan	35.02	34.39	25.96	32.60
Kuwait	42.28	42.18	41.94	41.57
Lebanon	89.90	96.06	87.51	81.25
Libya		50.18	50.22	48.93
Mauritania			66.24	39.20
Morocco	102.46	92.08	98.21	48.58
Oman	23.13	22.21	21.79	21.79
Palestine	142.93	150.52	147.27	125.81
Qatar	62.36	61.69	53.63	51.67
Saudi Arabia	47.05	45.28	47.68	39.15
Somalia				
Sudan	22.63	27.10	26.50	17.09
Syria			78.73	122.55
Tunisia	38.59	36.25	36.92	36.92
UAE	30.59	30.79	28.78	29.63
Yemen	52.44	52.55	39.79	51.57

Arab average	60.41	58.82	56.25	53.71
OECD average	N/A	N/A	22.93	18.17

■ Below Arab average
■ Above Arab average

Ranking for OECD mobile 400 messages basket

	2008	2009	2010	2011
Algeria	11	14	6	4
Bahrain	8	9	10	11
Comoros	16	17	19	18
Djibouti	-	-	-	-
Egypt	13	12	13	16
Iraq	3	3	5	10
Jordan	5	5	2	5
Kuwait	7	7	9	9
Lebanon	14	16	17	17
Libya	-	10	12	13
Mauritania	-	-	15	8
Morocco	15	15	18	12
Oman	2	1	1	2
Palestine	17	18	20	20
Qatar	12	13	14	15
Saudi Arabia	9	8	11	7
Somalia	-	-	-	-
Sudan	1	2	3	1
Syria	-	-	16	19
Tunisia	6	6	7	6
UAE	4	4	4	3
Yemen	10	11	8	14

■ Least expensive
■ Most expensive

Note: The year on year results and averages are based on lowest cost per country, and will not be the same as the average across all carriers and countries
Comparable OECD data is not available for 2008 and 2009



Leased line basket 2011 results (2010 version of OECD baskets)

Leased line basket, as defined by the OECD (2010 version of OECD baskets)

- 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

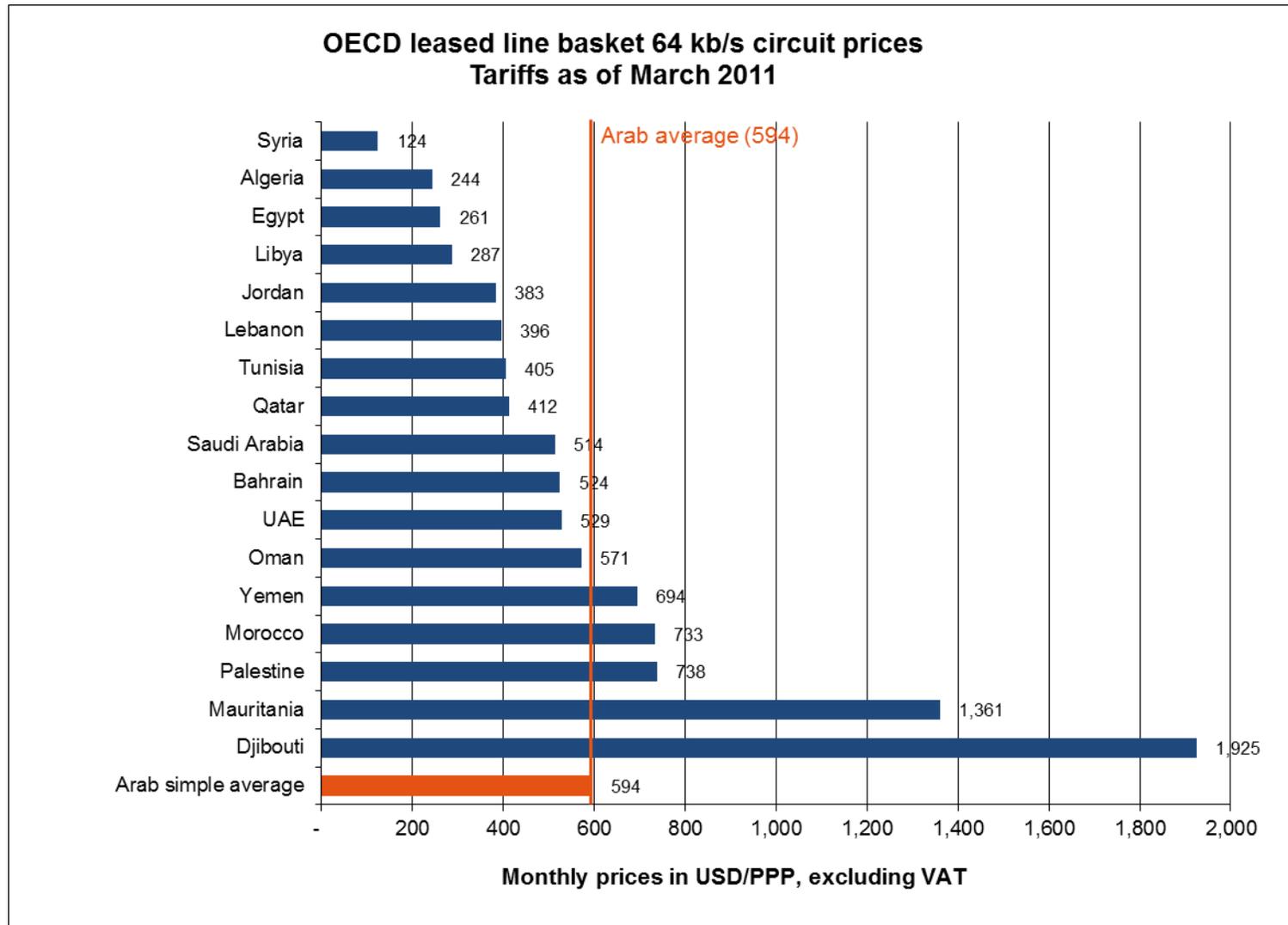


Leased line data issues

- Tariff data was researched from operator websites in March 2011.
 - Additional clarifications have been sought from the operators and regulators.
 - Regulators have been offered the opportunity to comment on the tariff information.
- No price data available for:
 - Comoros
 - Iraq
 - Kuwait
 - Somalia
 - Sudan
- Other countries may have data missing for specific bitrates



64 kb/s OECD leased line basket results

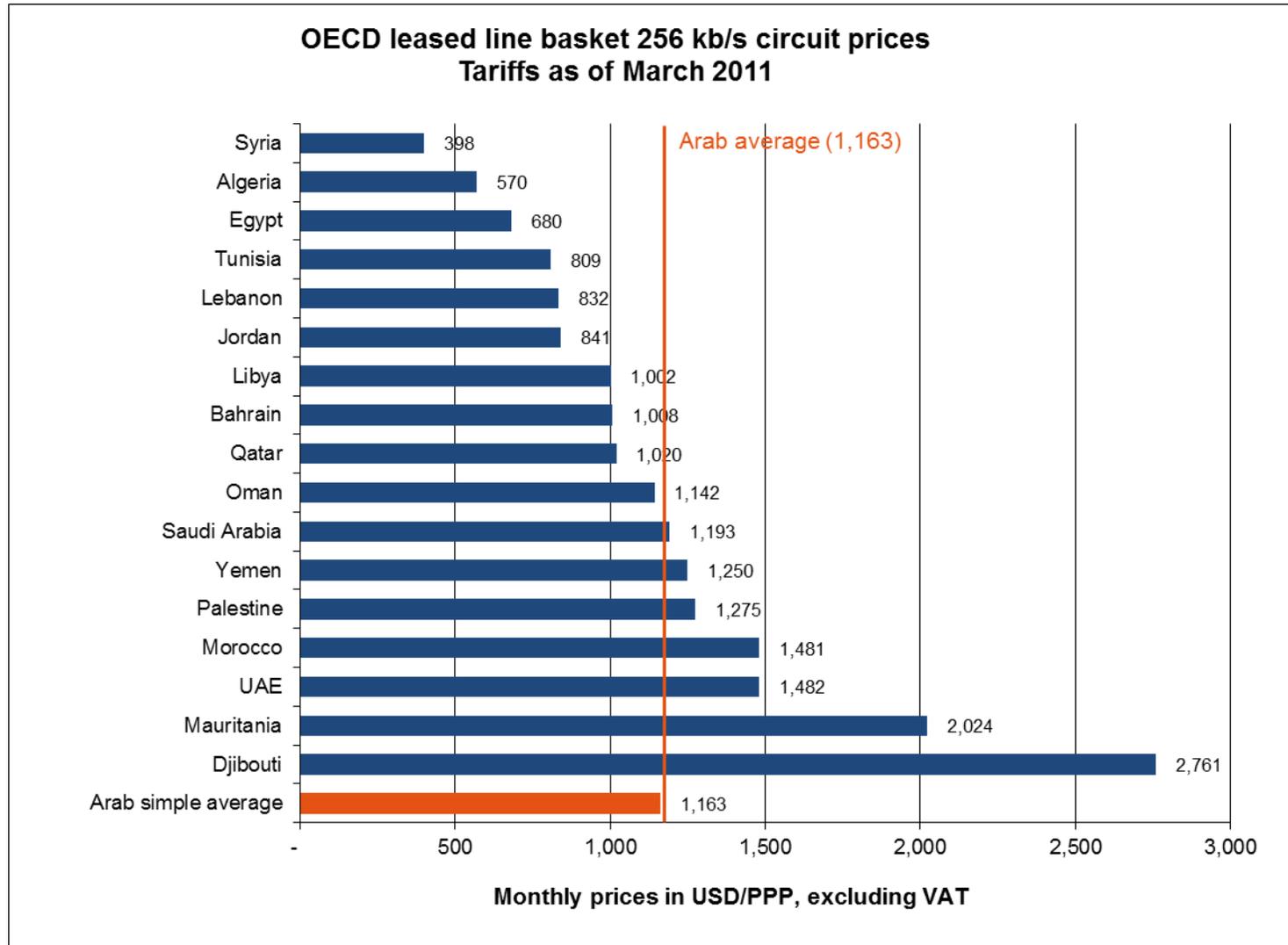


The 64 kb/s basket is no longer covered within the OECD baskets, however the standard 2010 methodology has been applied 64 kb/s circuits for the Arab countries



Note: No equivalent OECD data exists.

256kb/s OECD leased line basket results

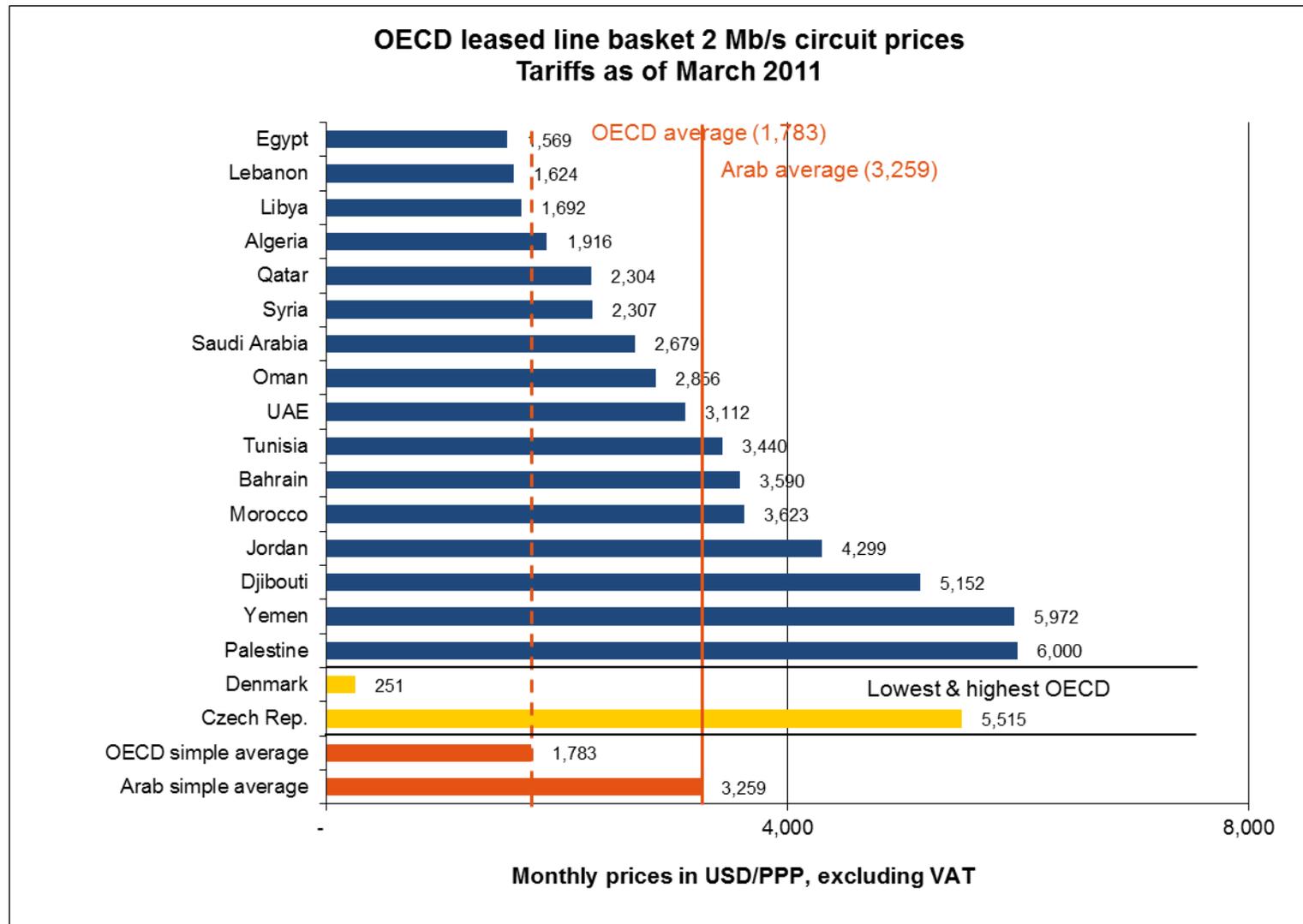


The OECD basket does not cover 256 kb/s, however the standard 2010 methodology has been applied to 256 kb/s circuits for the Arab countries



Note: No equivalent OECD data exists.

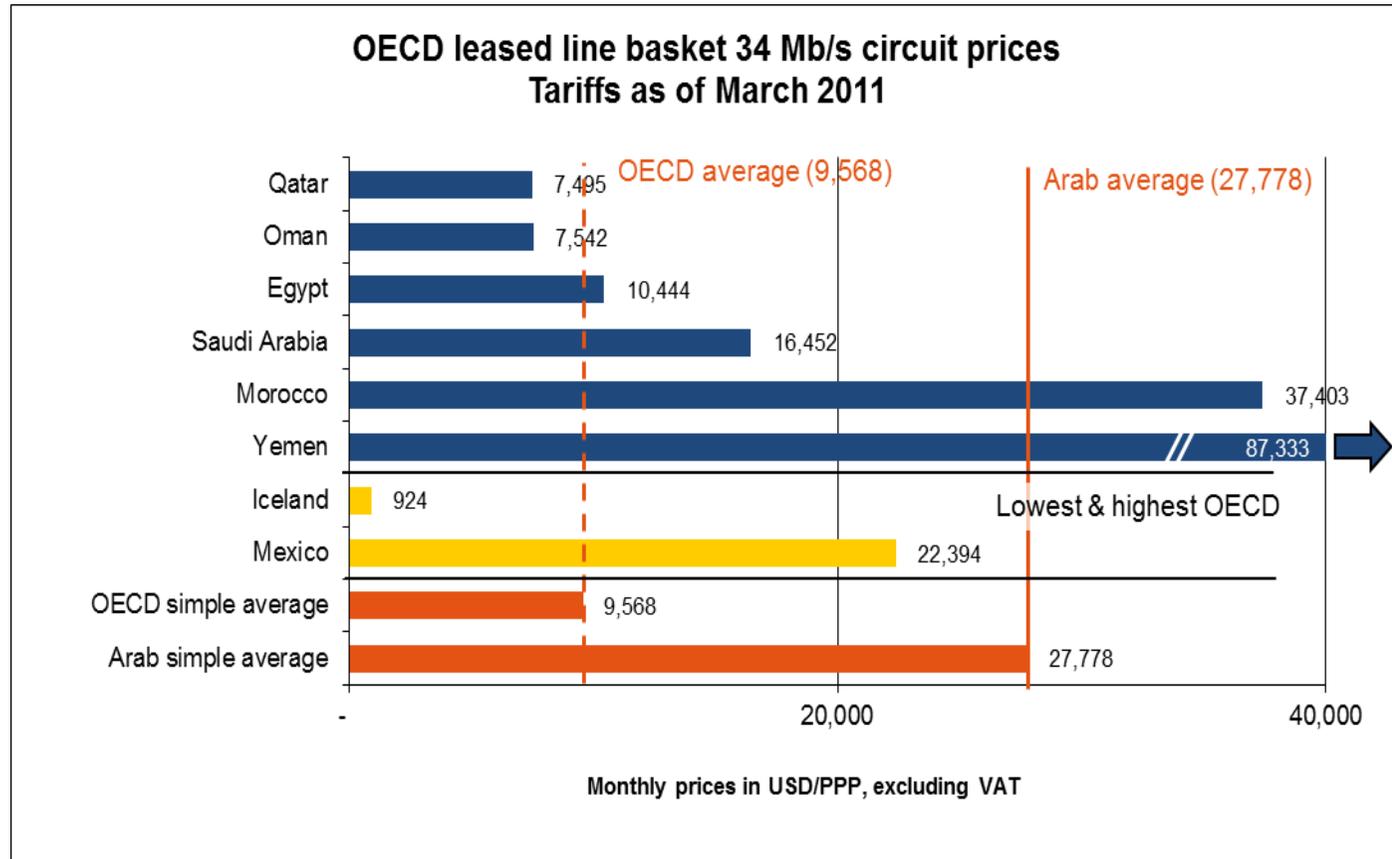
2 Mb/s OECD leased line basket results



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



34 Mb/s OECD leased line basket results



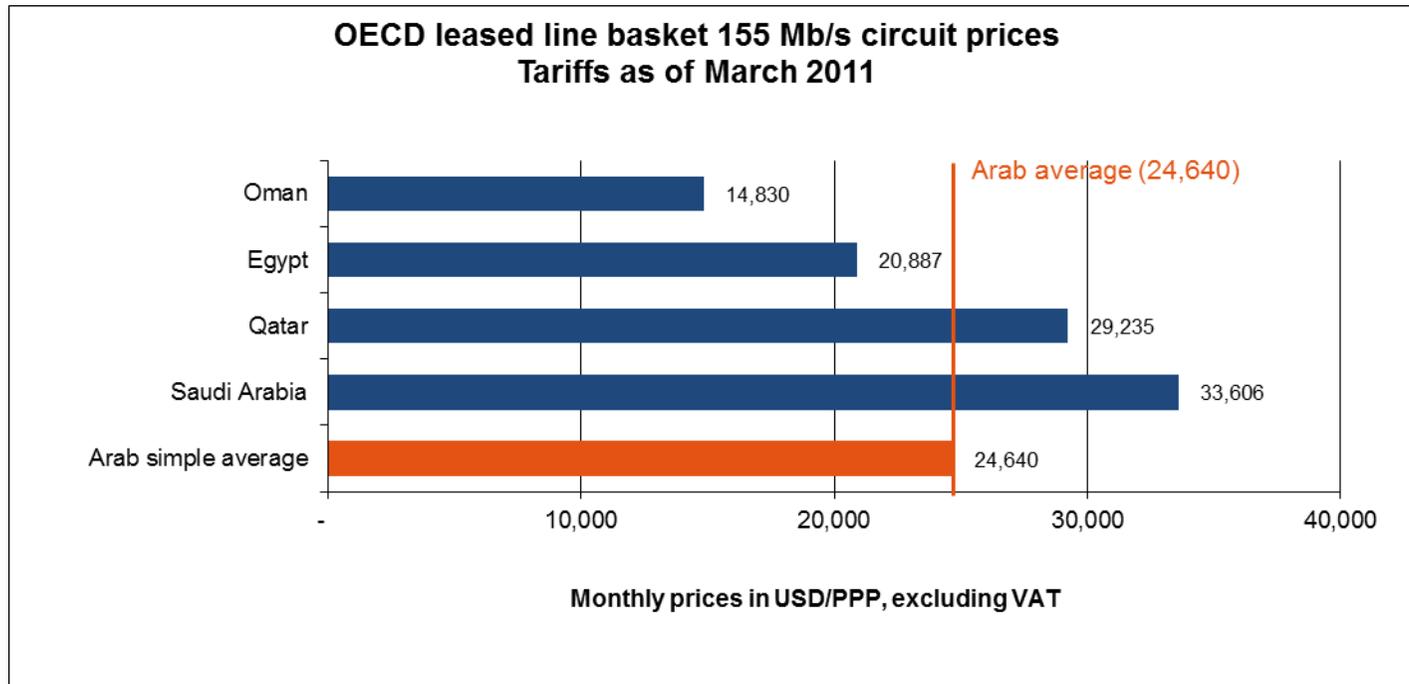
The OECD data shown represents the lowest and highest prices found in OECD countries, and the average across all 34 OECD countries.

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

Note that the horizontal axis has been manually adjusted, and the bar for Yemen is not shown fully, as this would make the other results difficult to read.



155 Mb/s OECD leased line basket results



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

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

Note: No equivalent OECD data exists.



Observations from leased line results

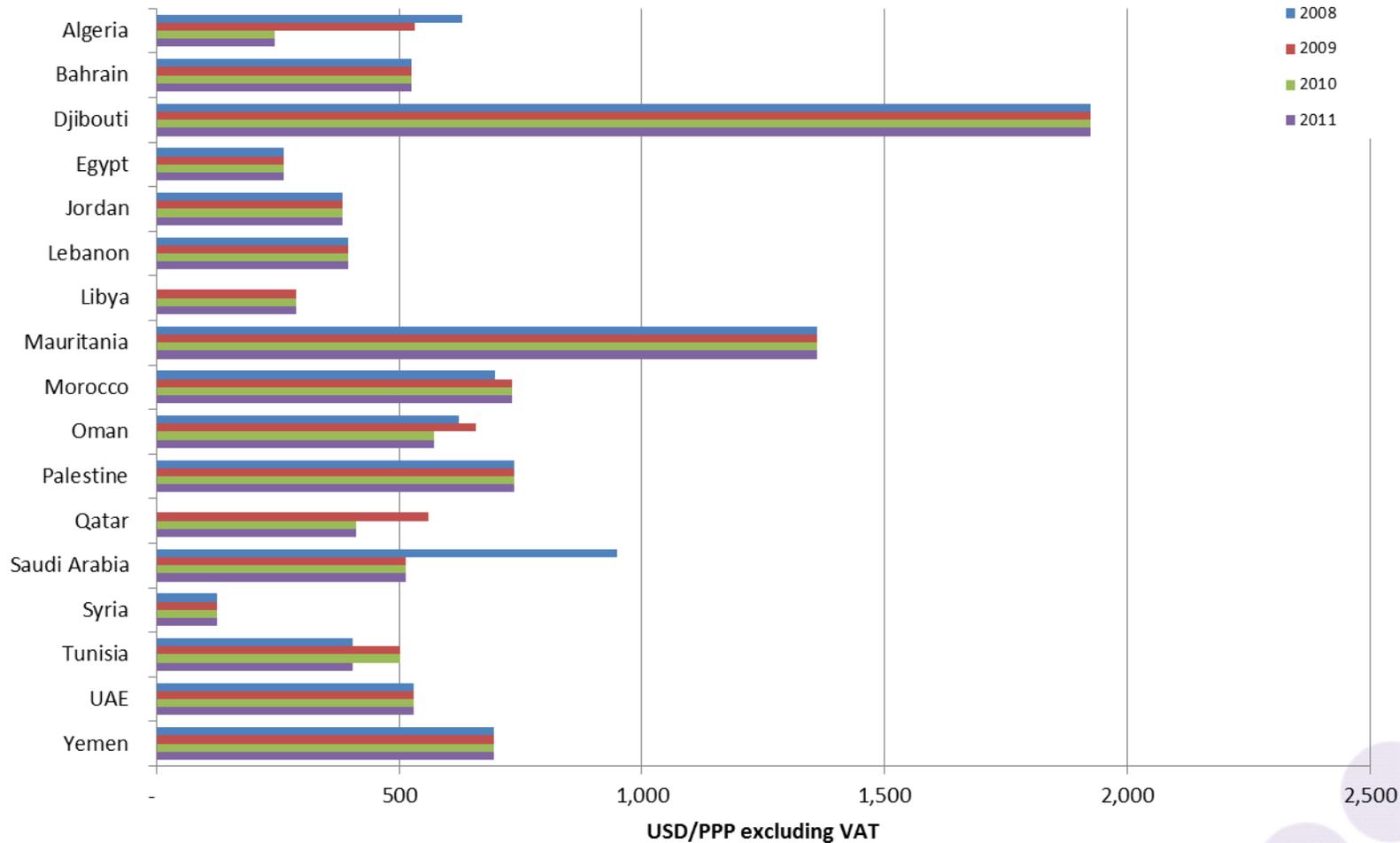
- Algeria, Egypt, Libya, Syria, and to a lesser extent, Lebanon, have the lowest prices for National Leased Lines.
 - The price ranking may vary with product
- For 34 Mb/s and 155 Mb/s some of the prices are not available in the public domain, and have not been included.
- For 64 kb/s and 256 kb/s, the prices in Djibouti and Mauritania stands out as very high.
- For 2 Mb/s, most of the Arab countries have prices below the most expensive OECD country
 - However, all Arab countries are significantly more expensive than the OECD “best-in-class” at this speed
 - Only 3 of the 16 Arab countries (less than 20%), are below the OECD average.
- Although the 34 Mb/s average for the Arab countries is considerably higher than the OECD average at this speed, - almost 3 times – this is as a result of particularly high circuit costs in Yemen and, to a lesser extent, Morocco
 - 3 of the 6 Arab countries analysed are on par with the OECD average cost
 - All are considerably more expensive than the OECD “best-in-class” at this speed, however
- 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 shown here.



Leased line time series analysis (2010 version of OECD baskets)

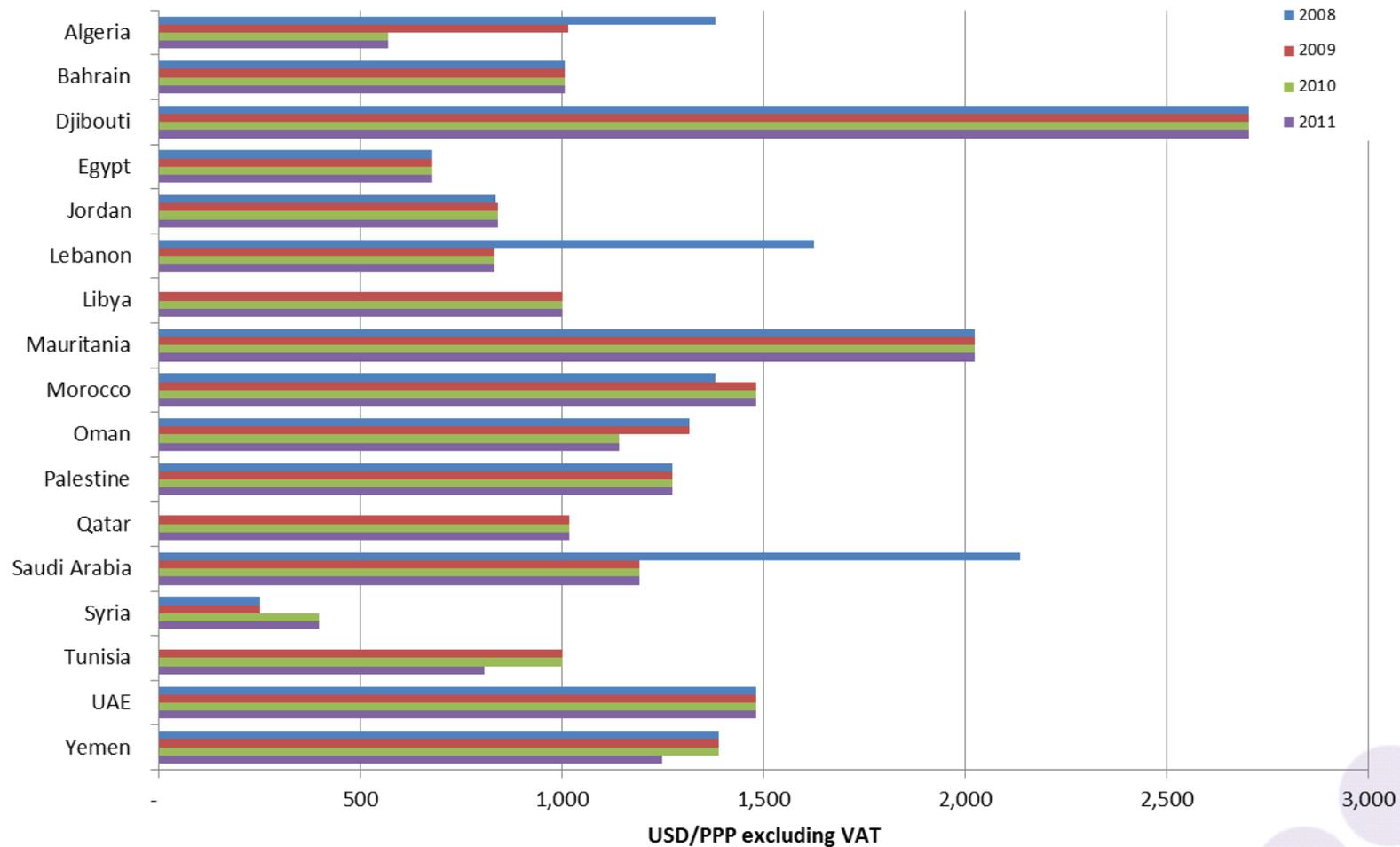
2010 OECD leased line baskets time series, 64 kb/s

OECD leased line basket 64 kb/s circuits
Tariffs 2008 - 2011



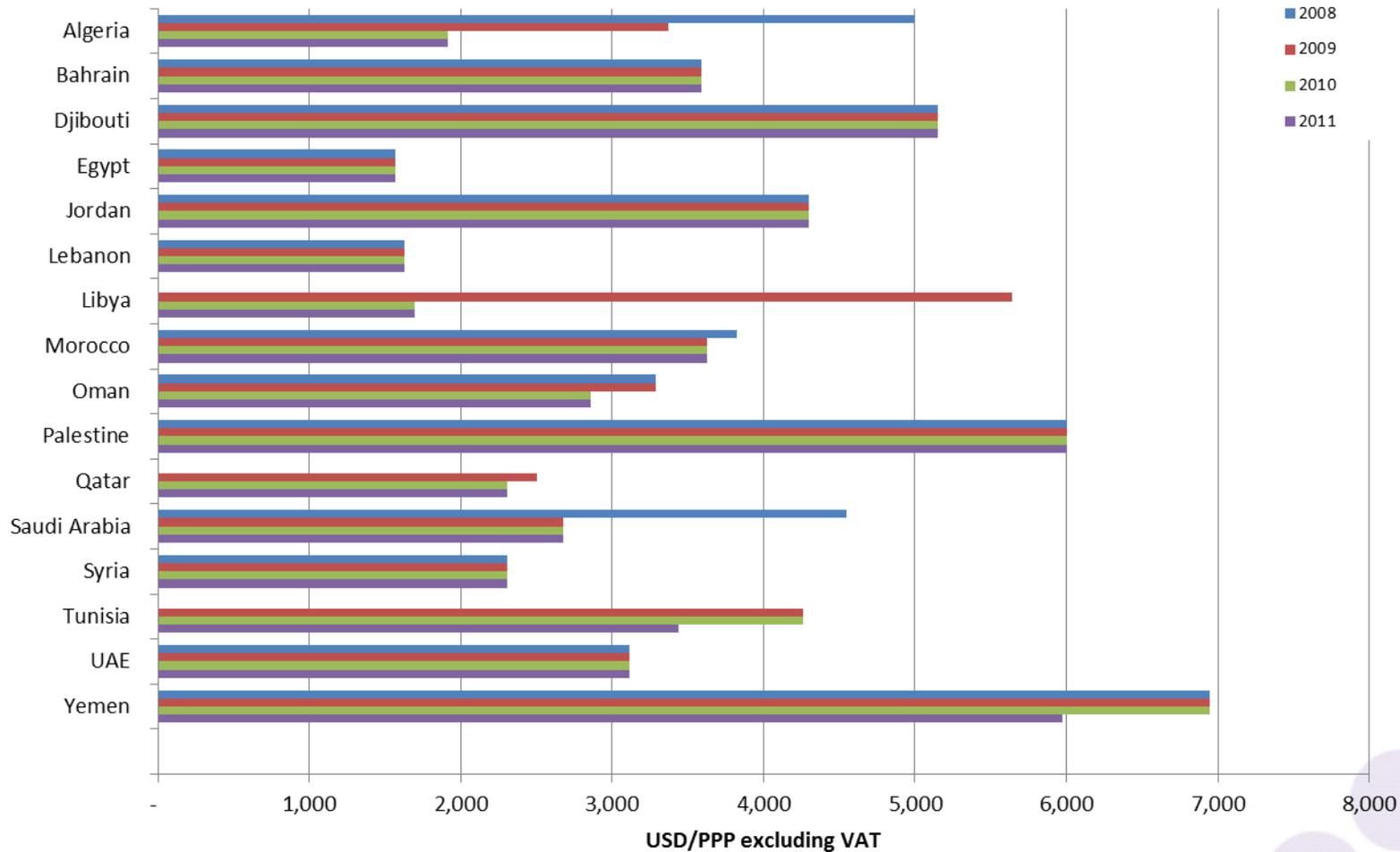
2010 OECD leased line baskets time series, 256 kb/s

OECD leased line basket 256 kb/s circuits
Tariffs 2008 - 2011



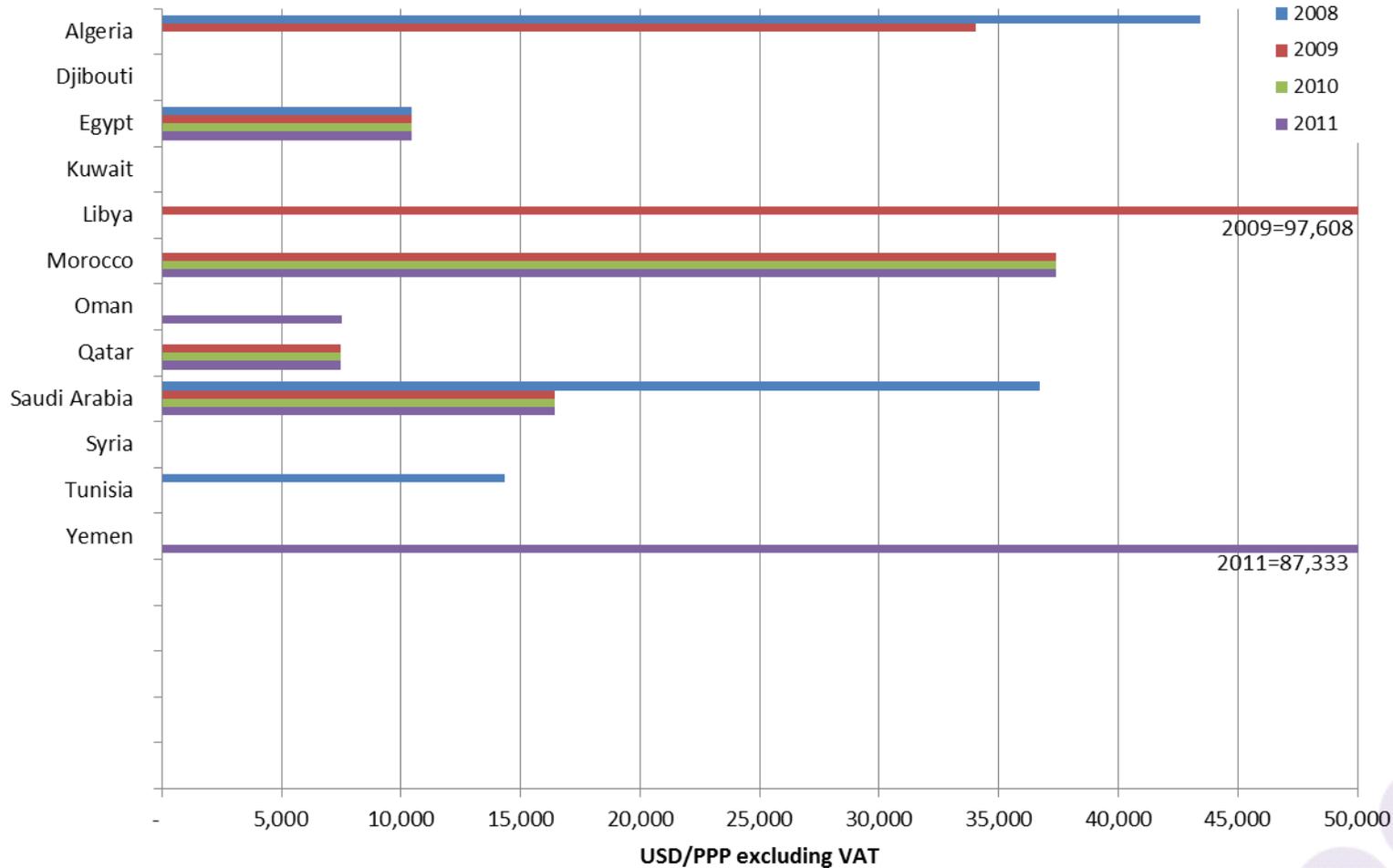
2010 OECD leased line baskets time series, 2 Mb/s

OECD leased line basket 2 Mb/s circuits
Tariffs 2008 - 2011



2010 OECD leased line baskets time series, 34 Mb/s

OECD leased line basket 34 Mb/s circuits
Tariffs 2008 - 2011

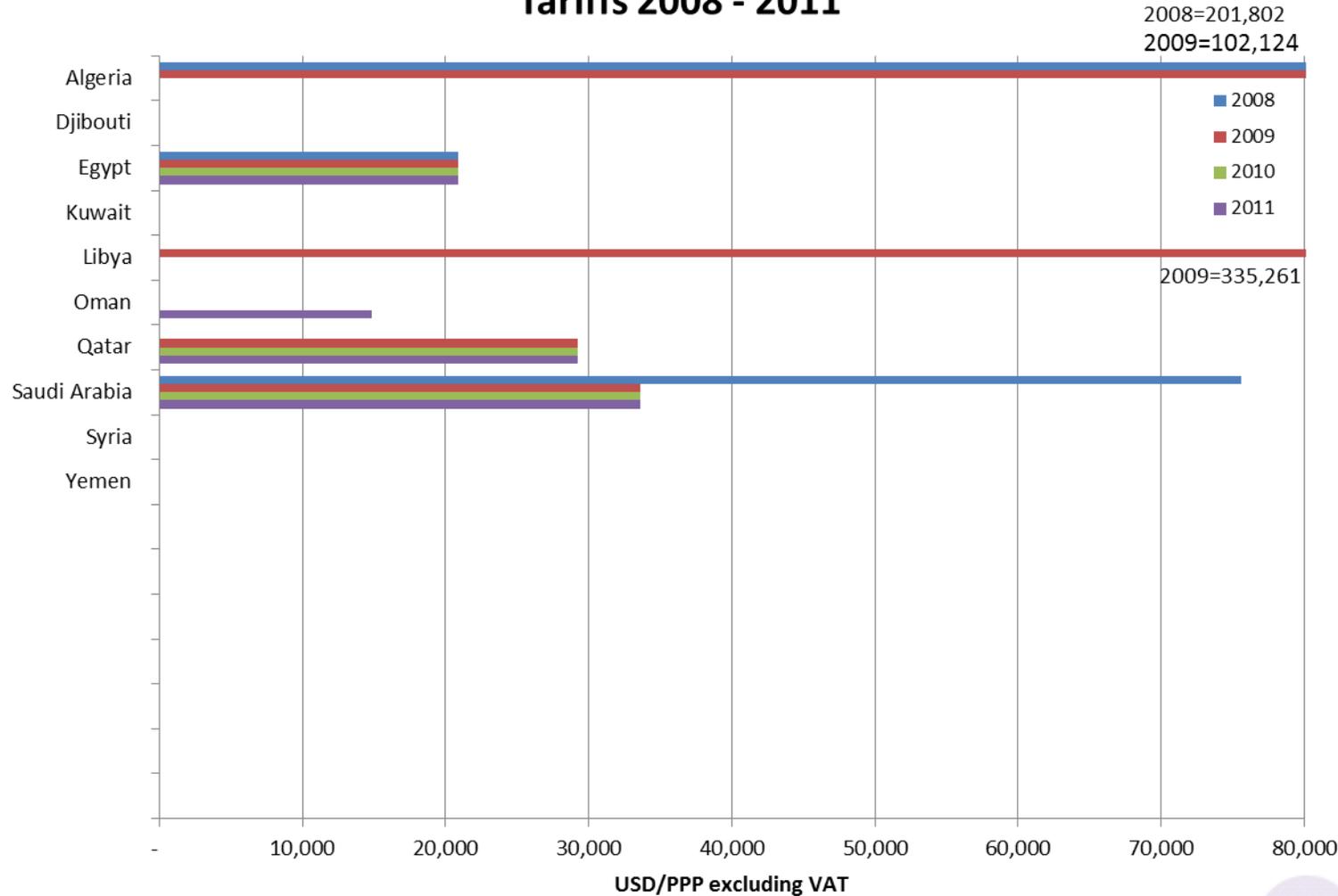


Note that the horizontal axis has been manually adjusted, and the bars for Libya and Yemen are not shown fully, as this would make the other results difficult to read.



2010 OECD leased line baskets time series, 155 Mb/s

OECD leased line basket 155 Mb/s circuits
Tariffs 2008 - 2011



Note that the horizontal axis has been manually adjusted, and the bars for Algeria and Libya are not shown fully, as this would make the other results difficult to read.



Observations from leased line time series results

- Leased line prices have been generally stable, with no change to many of the operators' prices.
- Price reductions occurred in only two countries between 2010 and 2011:
 - Tunisia: 64 kb/s, 256 kb/s and 2 Mb/s circuit prices were reduced
 - Yemen: 256 kb/s and 2 Mb/s circuit prices were reduced.
 - No price changes recorded in other countries.
 - 34 Mb/s and 155 Mb/s circuits are now available with published prices in Oman, while Yemen now offers and publishes prices for 34 Mb/s circuits.
- The Arab average compared to the OECD average has fallen for 2 Mb/s circuits, but the introduction of very expensive 34 Mb/s circuits in Yemen has pushed up the Arab average a lot compared to the OECD.

		64k	2M	34M
Arab/OECD average	2008	198%	251%	252%
	2009	136%	198%	257%
	2010	104%	239%	121%
	2011	N/A	183%	290%

Please note: The averages for 2008-2010 are based on the OECD 2006 methodology. The calculations are only for guideline purposes, and do not differ significantly between the 2006 and 2010 OECD methodologies. The average is only calculated on the basis of the prices shown. As the range of countries publishing prices may change from year to year the average may also change on that basis.



Leased line ranking tables, 2008-2011

OECD leased line basket 64 kb/s ranking

Total results for OECD 64 kb/s leased line basket
Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria	629	532	244	244
Bahrain	524	524	524	524
Comoros				
Djibouti	1,925	1,925	1,925	1,925
Egypt	261	261	261	261
Iraq				
Jordan	383	383	383	383
Kuwait				
Lebanon	396	396	396	396
Libya		287	287	287
Mauritania	1,361	1,361	1,361	1,361
Morocco	699	733	733	733
Oman	622	658	571	571
Palestine	738	738	738	738
Qatar		561	412	412
Saudi Arabia	948	514	514	514
Somalia				
Sudan				
Syria	124	124	124	124
Tunisia	405	501	501	405
UAE	529	529	529	529
Yemen	694	694	694	694

Arab average	683	631	600	594
OECD average	N/A	N/A	N/A	N/A

■ Below Arab average
■ Above Arab average

Comparable OECD data is not available

Ranking for OECD 64 kb/s leased line basket

	2008	2009	2010	2011
Algeria	9	10	2	2
Bahrain	6	8	10	10
Comoros	-	-	-	-
Djibouti	15	17	17	17
Egypt	2	2	3	3
Iraq	-	-	-	-
Jordan	3	4	5	5
Kuwait	-	-	-	-
Lebanon	4	5	6	6
Libya	-	3	4	4
Mauritania	14	16	16	16
Morocco	11	14	14	14
Oman	8	12	12	12
Palestine	12	15	15	15
Qatar	-	11	7	8
Saudi Arabia	13	7	9	9
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	1	1	1	1
Tunisia	5	6	8	7
UAE	7	9	11	11
Yemen	10	13	13	13

■ Least expensive
■ Most expensive



OECD leased line basket 256 kb/s ranking

Total results for OECD 256 kb/s leased line basket
Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria	1,382	1,016	570	570
Bahrain	1,008	1,008	1,008	1,008
Comoros				
Djibouti	2,761	2,761	2,761	2,761
Egypt	680	680	680	680
Iraq				
Jordan	837	841	841	841
Kuwait				
Lebanon	1,624	832	832	832
Libya		1,002	1,002	1,002
Mauritania	2,024	2,024	2,024	2,024
Morocco	1,382	1,481	1,481	1,481
Oman	1,316	1,316	1,142	1,142
Palestine	1,275	1,275	1,275	1,275
Qatar		1,020	1,020	1,020
Saudi Arabia	2,135	1,193	1,193	1,193
Somalia				
Sudan				
Syria	251	251	398	398
Tunisia		1,003	1,003	809
UAE	1,482	1,482	1,482	1,482
Yemen	1,389	1,389	1,389	1,250

Arab average	1,396	1,210	1,182	1,163
OECD average	N/A	N/A	N/A	N/A

█ Below Arab average
█ Above Arab average

Comparable OECD data is not available

Ranking for OECD 256 kb/s leased line basket

	2008	2009	2010	2011
Algeria	8	8	2	2
Bahrain	4	7	8	8
Comoros	-	-	-	-
Djibouti	14	17	17	17
Egypt	2	2	3	3
Iraq	-	-	-	-
Jordan	3	4	5	6
Kuwait	-	-	-	-
Lebanon	11	3	4	5
Libya	-	5	6	7
Mauritania	12	16	16	16
Morocco	7	14	14	14
Oman	6	12	10	10
Palestine	5	11	12	13
Qatar	-	9	9	9
Saudi Arabia	13	10	11	11
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	1	1	1	1
Tunisia	-	6	7	4
UAE	10	15	15	15
Yemen	9	13	13	12

█ Least expensive
█ Most expensive



OECD leased line basket 2 Mb/s ranking

Total results for OECD 2 Mb/s leased line basket

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria	4,998	3,372	1,916	1,916
Bahrain	3,590	3,590	3,590	3,590
Comoros				
Djibouti	5,152	5,152	5,152	5,152
Egypt	1,569	1,569	1,569	1,569
Iraq				
Jordan	4,299	4,299	4,299	4,299
Kuwait				
Lebanon	1,624	1,624	1,624	1,624
Libya		5,642	1,692	1,692
Mauritania				
Morocco	3,824	3,623	3,623	3,623
Oman	3,290	3,290	2,856	2,856
Palestine	6,000	6,000	6,000	6,000
Qatar		2,502	2,304	2,304
Saudi Arabia	4,549	2,679	2,679	2,679
Somalia				
Sudan				
Syria	2,307	2,307	2,307	2,307
Tunisia		4,262	4,262	3,440
UAE	3,112	3,112	3,112	3,112
Yemen	6,944	6,944	6,944	5,972

Arab average	3,943	3,748	3,371	3,259
OECD average	N/A	N/A	1,811	1,783

■ Below Arab average
■ Above Arab average

Ranking for OECD 2 Mb/s leased line basket

	2008	2009	2010	2011
Algeria	10	8	4	4
Bahrain	6	9	10	11
Comoros	-	-	-	-
Djibouti	11	13	14	14
Egypt	1	1	1	1
Iraq	-	-	-	-
Jordan	8	12	13	13
Kuwait	-	-	-	-
Lebanon	2	2	2	2
Libya	-	14	3	3
Mauritania	-	-	-	-
Morocco	7	10	11	12
Oman	5	7	8	8
Palestine	12	15	15	16
Qatar	-	4	5	5
Saudi Arabia	9	5	7	7
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	3	3	6	6
Tunisia	-	11	12	10
UAE	4	6	9	9
Yemen	13	16	16	15

■ Least expensive
■ Most expensive



Comparable OECD data is not available for 2008 and 2009

OECD leased line basket 34 Mb/s ranking

Total results for OECD 34 Mb/s leased line basket
Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria	43,426	34,041		
Bahrain				
Comoros				
Djibouti				
Egypt	10,444	10,444	10,444	10,444
Iraq				
Jordan				
Kuwait				
Lebanon				
Libya		97,608		
Mauritania				
Morocco		37,403	37,403	37,403
Oman				7,542
Palestine				
Qatar		7,495	7,495	7,495
Saudi Arabia	36,733	16,452	16,452	16,452
Somalia				
Sudan				
Syria				
Tunisia	14,340			
UAE				
Yemen				87,333

Arab average	26,236	33,907	17,948	27,778
OECD average	N/A	N/A	10,343	9,568

■ Below Arab average
■ Above Arab average

Comparable OECD data is not available for 2008 and 2009

Ranking for OECD 34 Mb/s leased line basket

	2008	2009	2010	2011
Algeria	4	4	-	-
Bahrain	-	-	-	-
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	1	2	2	3
Iraq	-	-	-	-
Jordan	-	-	-	-
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	6	-	-
Mauritania	-	-	-	-
Morocco	-	5	4	5
Oman	-	-	-	2
Palestine	-	-	-	-
Qatar	-	1	1	1
Saudi Arabia	3	3	3	4
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	2	-	-	-
UAE	-	-	-	-
Yemen	-	-	-	6

■ Least expensive
■ Most expensive



OECD leased line basket 155 Mb/s ranking

Total results for OECD 155 Mb/s leased line basket

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria	201,802	102,124		
Bahrain				
Comoros				
Djibouti				
Egypt	20,887	20,887	20,887	20,887
Iraq				
Jordan				
Kuwait				
Lebanon				
Libya		335,261		
Mauritania				
Morocco				
Oman				14,830
Palestine				
Qatar		29,235	29,235	29,235
Saudi Arabia	75,592	33,606	33,606	33,606
Somalia				
Sudan				
Syria				
Tunisia				
UAE				
Yemen				

Arab average	99,427	104,222	27,909	24,640
OECD average	N/A	N/A	N/A	N/A

- Below Arab average
- Above Arab average

Comparable OECD data is not available

Ranking for OECD 155 Mb/s leased line basket

	2008	2009	2010	2011
Algeria	3	4	-	-
Bahrain	-	-	-	-
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	1	1	1	2
Iraq	-	-	-	-
Jordan	-	-	-	-
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	5	-	-
Mauritania	-	-	-	-
Morocco	-	-	-	-
Oman	-	-	-	1
Palestine	-	-	-	-
Qatar	-	2	2	3
Saudi Arabia	2	3	3	4
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	-	-	-	-
UAE	-	-	-	-
Yemen	-	-	-	-

- Least expensive
- Most expensive



Fixed broadband basket 2011 results (2010 version of baskets)

Fixed broadband basket methodology

- Research covering 200 ADSL service offerings from the incumbent ISP* in 18 Arab countries
- Costs are prepared using the OECD broadband basket methodology, and are presented for the OECD low speed (> 256 kb/s), medium speed (>2.5 Mb/s) and high speed (>15 Mb/s) baskets separately. There are higher speed OECD baskets, however there are no relevant services available within the Arab countries
 - Most providers do not offer services across all three categories
 - Costs shown are for both residential and business services
- Total monthly cost calculated based on two usage profiles, which are dependent on the speed of service:
 - Low speed:
 - low usage: 2 GB and 10 hours per month, in 60 minute sessions.
 - high usage: 6 GB and 30 hours per month, in 60 minute sessions.
 - Medium speed
 - low usage: 6 GB and 15 hours per month, in 60 minute sessions.
 - high usage: 18 GB and 45 hours per month, in 60 minute sessions.
 - High speed
 - low usage: 11 GB and 20 hours per month, in 60 minute sessions.
 - high usage: 33 GB and 60 hours per month, in 60 minute sessions.
- Only “actual price” results are shown in this report.
 - “Actual price” refers to the monthly cost paid by the customer, as opposed to the “Normalised” price per 1 Mb/s that can also be produced by the benchmarking system
- The OECD data shown refer to the incumbent ISP* ADSL services in the 34 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
 - Please also see the document on “AREGNET Price Benchmarking Methodology



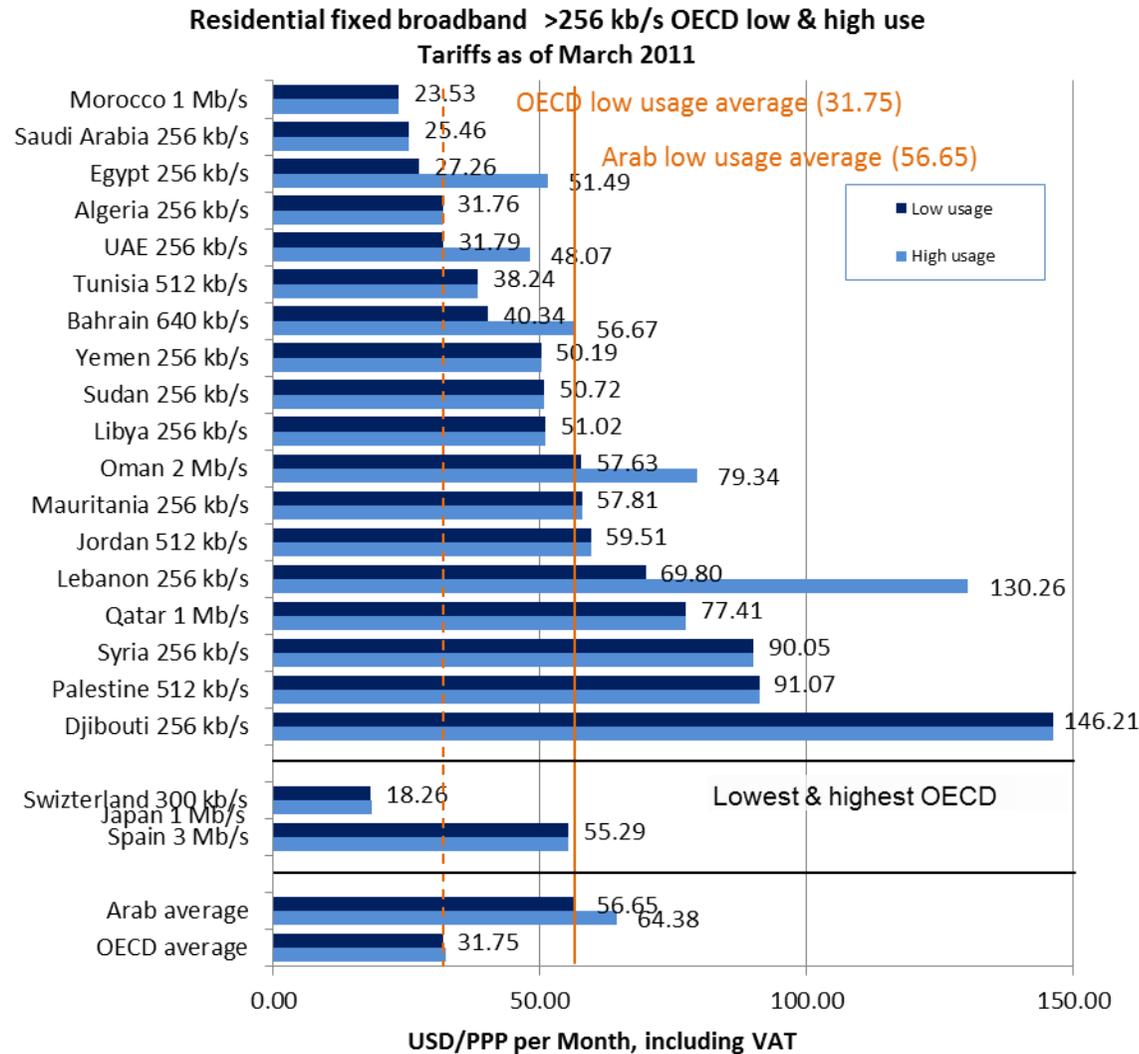
* Incumbent ISP will normally mean the ISP owned by the incumbent operator in the country.

Fixed broadband data issues

- Tariff data was researched from operator websites in March 2011.
- Price data is not available for broadband services in:
 - Comoros
 - Iraq
 - Kuwait
 - Somalia
- Regulators have been offered the opportunity to comment on the tariff information.
- Speeds have increased since the last study, with fewer operators offering speeds of 128 kb/s. While the highest speed from many providers is 2 Mb/s or below, speeds above this are increasingly more common.
 - The results shown focus on speeds from 256 kb/s and upwards. This corresponds with the general definition of broadband.
 - Speeds above 2 Mb/s are available in 11 of the 18 countries, three more than in 2010



Residential fixed broadband low speed OECD basket > 256 kb/s



Total monthly cost calculated based on two usage baskets:

Low usage: 2 GB and 10 hours per month, in 60 minute sessions.

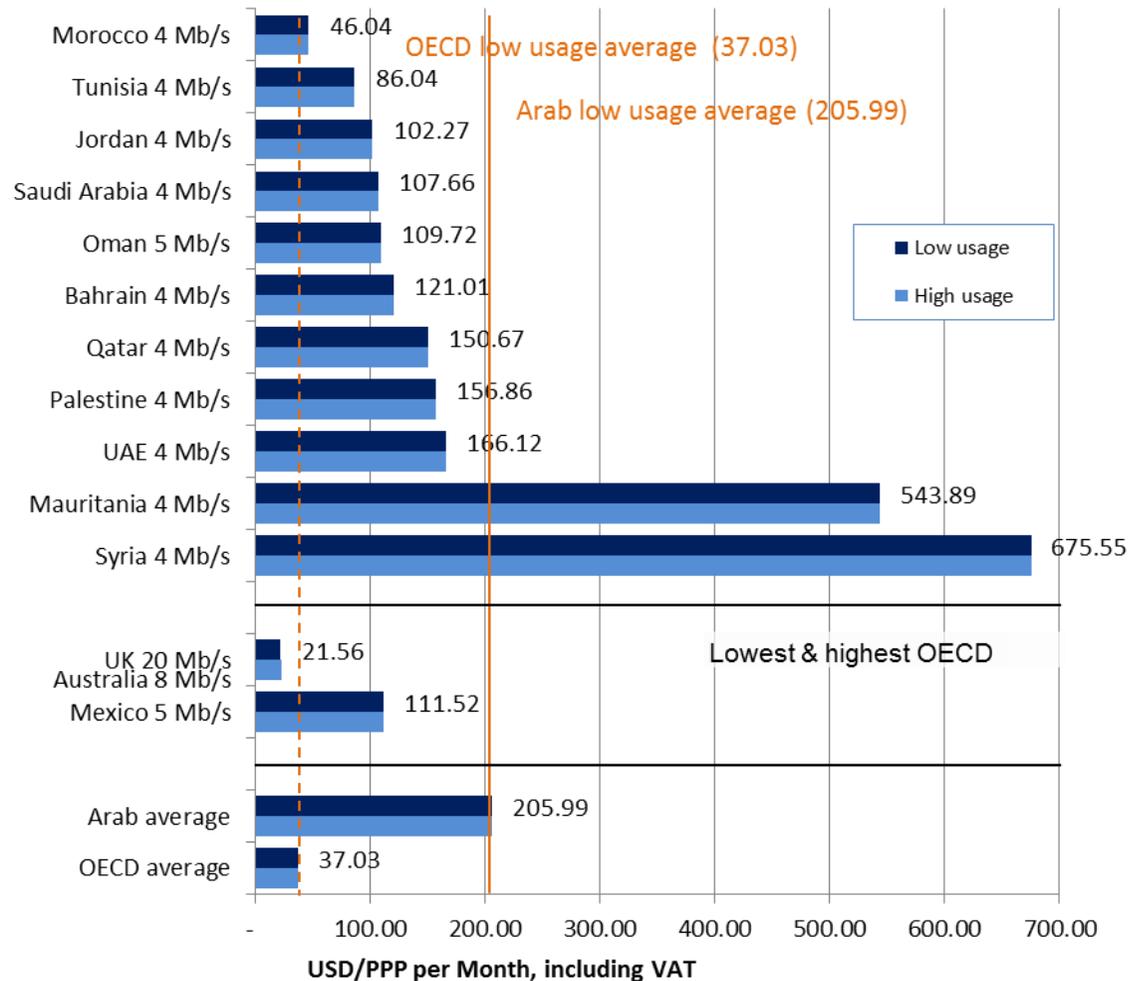
High usage: 6 GB and 30 hours per month, in 60 minute sessions.



Residential fixed broadband medium speed OECD basket > 2.5 Mb/s

Residential fixed broadband >2.5 Mb/s OECD low & high use

Tariffs as of March 2011



Total monthly cost calculated based on two usage baskets:

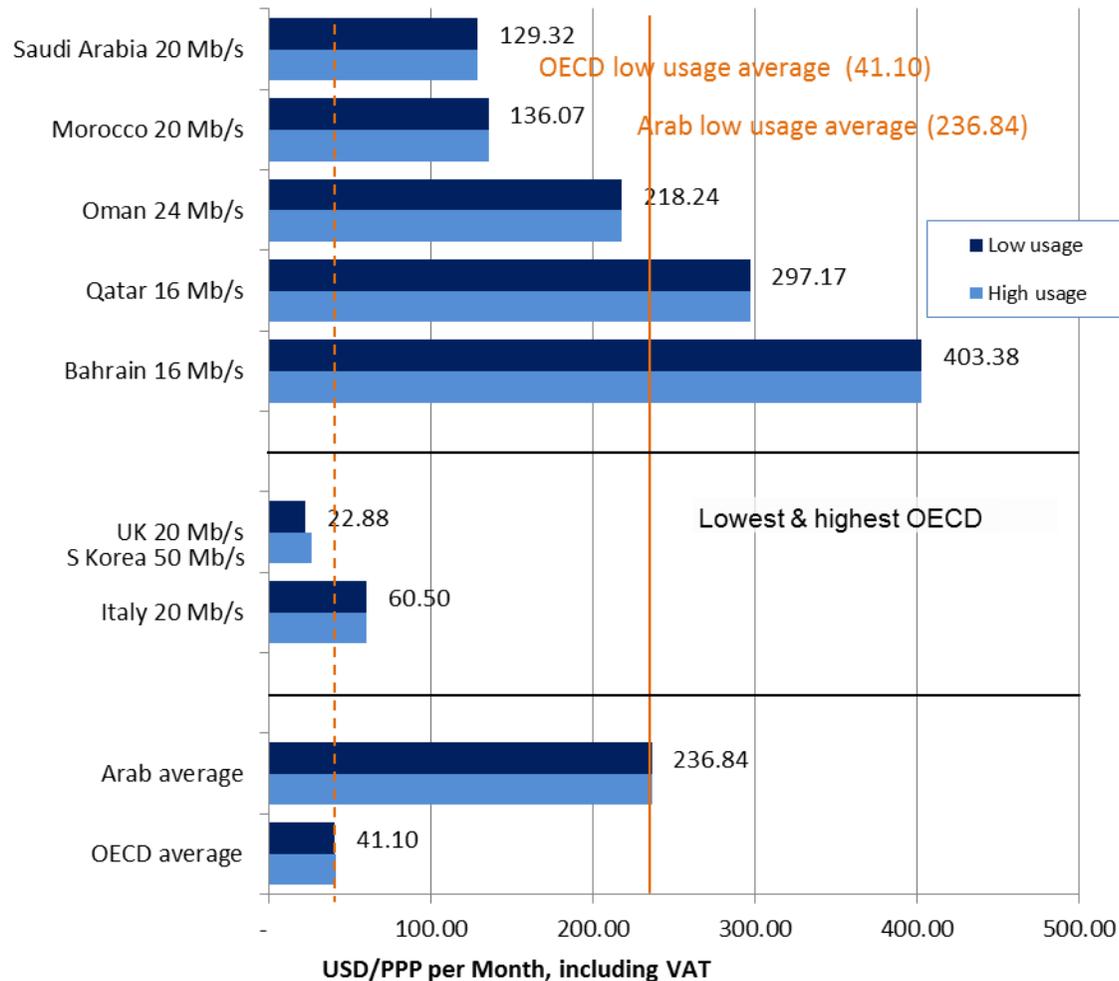
Low usage: 6 GB and 15 hours per month, in 60 minute sessions.

High usage: 18 GB and 45 hours per month, in 60 minute sessions.



Residential fixed broadband high speed OECD basket > 15 Mb/s

Residential fixed broadband >15 Mb/s OECD low & high use
Tariffs as of March 2011



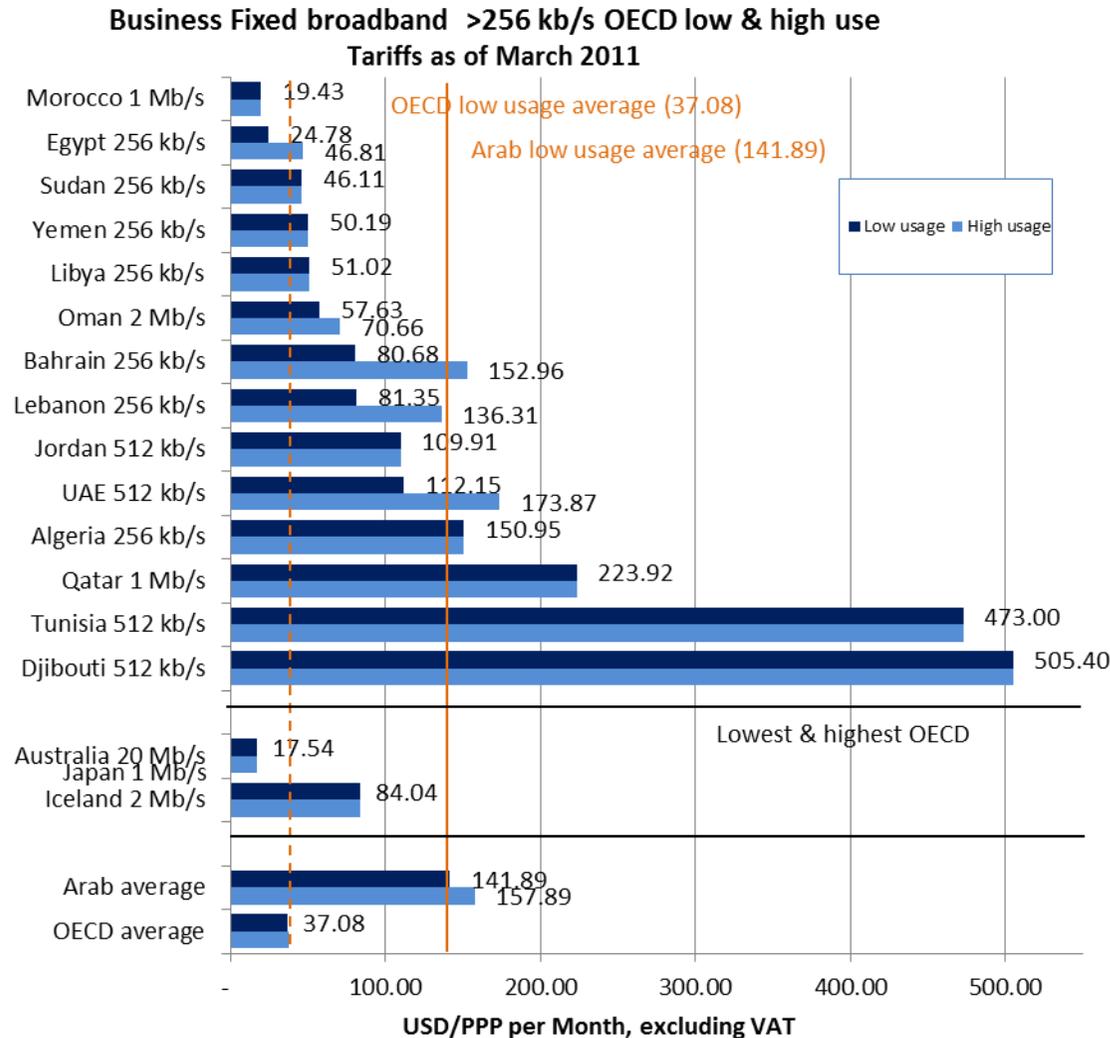
Total monthly cost calculated based on two usage baskets:

Low usage: 11 GB and 20 hours per month, in 60 minute sessions.

High usage: 33 GB and 60 hours per month, in 60 minute sessions.



Business fixed broadband low speed OECD basket > 256 kb/s



Total monthly cost calculated based on two usage baskets:

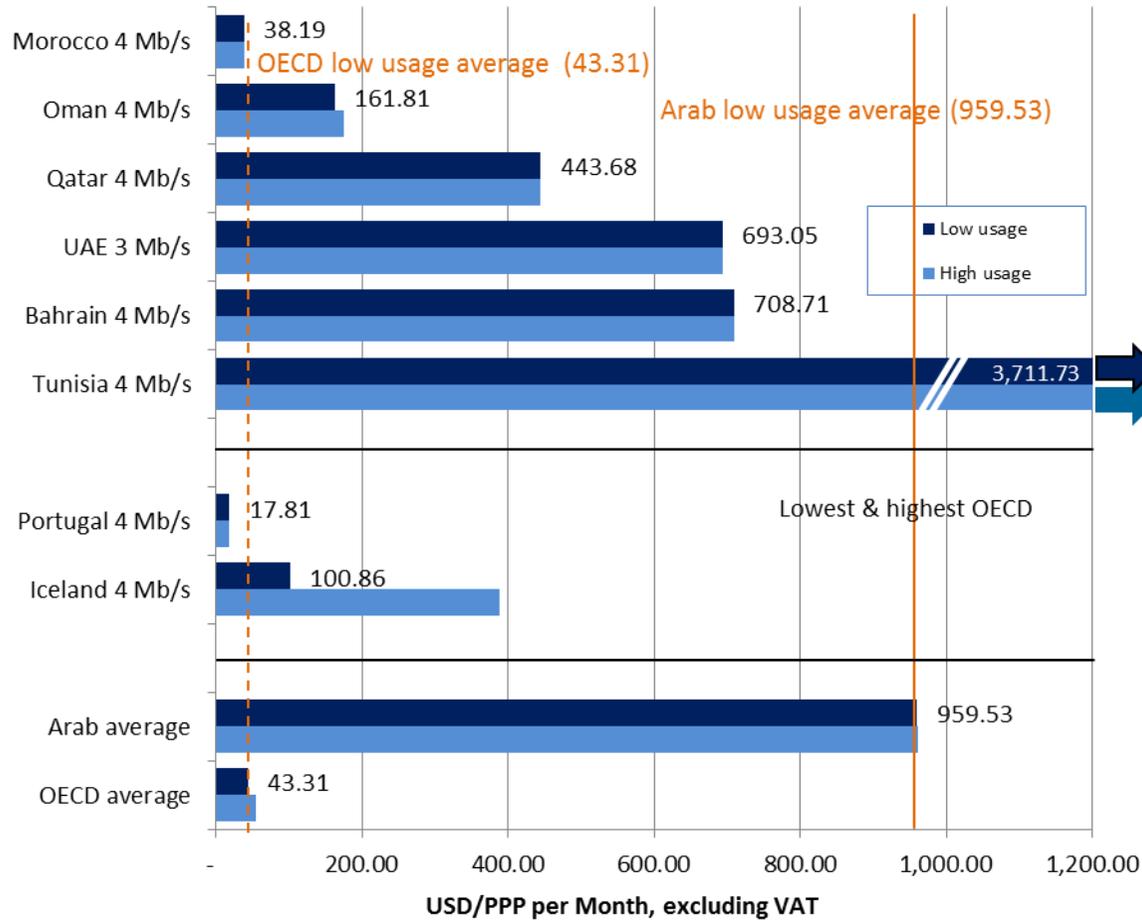
Low usage: 2 GB and 10 hours per month, in 60 minute sessions.

High usage: 6 GB and 30 hours per month, in 60 minute sessions.



Business fixed broadband medium speed OECD basket > 2.5 Mb/s

Business fixed broadband >2.5 Mb/s OECD low & high use
Tariffs as of March 2011



Total monthly cost calculated based on two usage baskets:

Low usage: 6 GB and 15 hours per month, in 60 minute sessions.

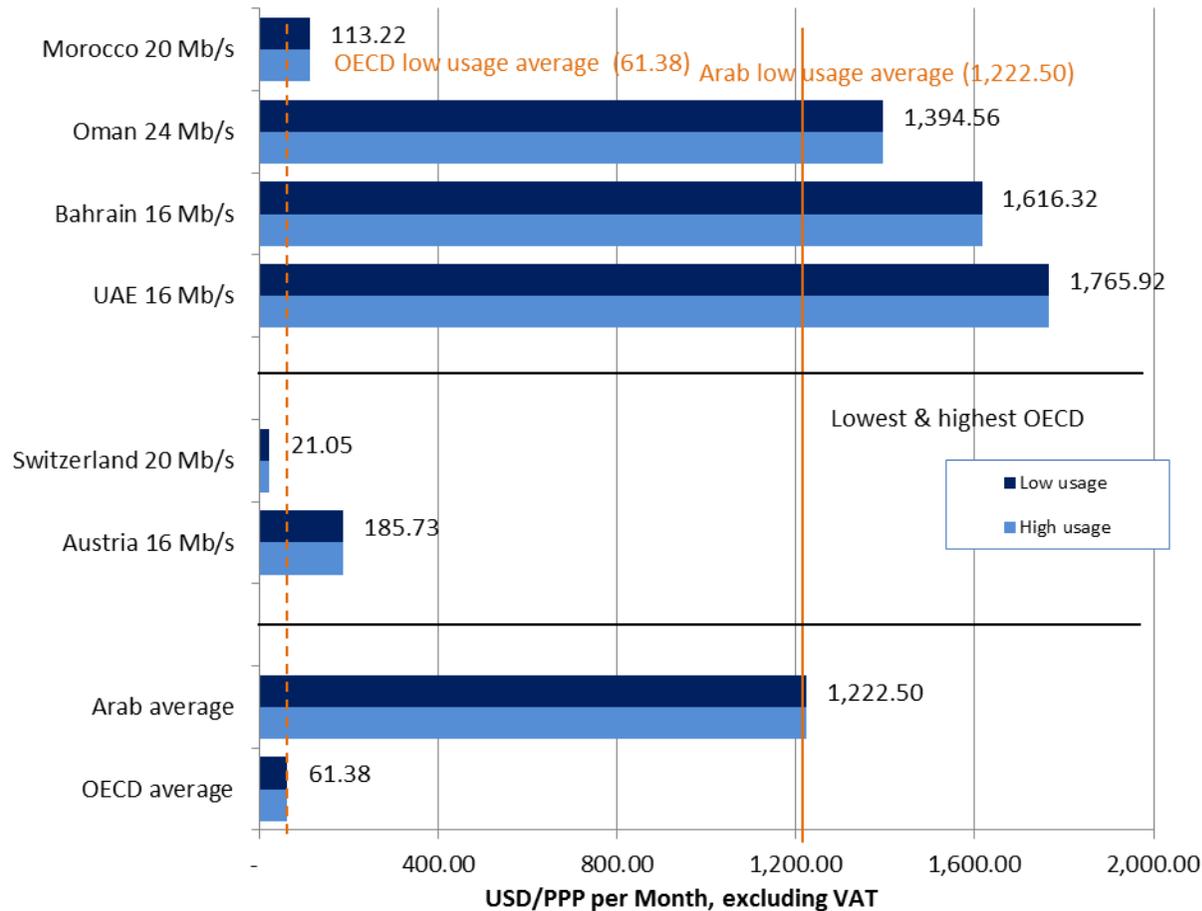
High usage: 18 GB and 45 hours per month, in 60 minute sessions.

Note that the horizontal axis has been manually adjusted, and the bar for Tunisia is not shown fully, as this would make the other results difficult to read



Business fixed broadband high speed OECD basket > 15 Mb/s

Business fixed broadband >15 Mb/s OECD low & high use
Tariffs as of March 2011



Total monthly cost calculated based on two usage baskets:

Low usage: 11 GB and 20 hours per month, in 60 minute sessions.

High usage: 33 GB and 60 hours per month, in 60 minute sessions.



Observations from fixed broadband basket results

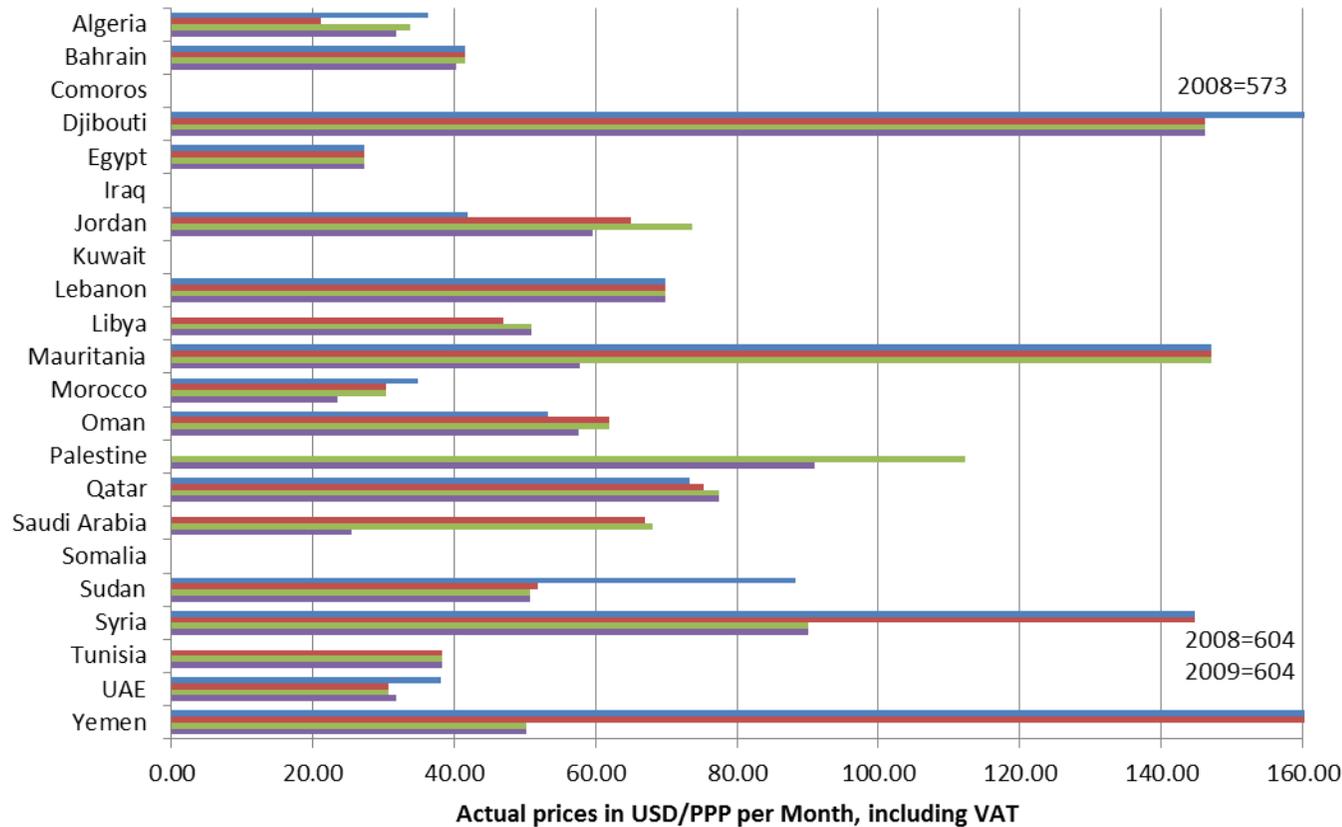
- Morocco, Saudi Arabia, Algeria, Tunisia and Egypt, have the lowest prices for residential broadband, while Morocco, Egypt, Oman and Sudan offer the lowest prices for business services.
- Speeds above 4 Mb/s appear to be offered in 9 of the countries:
 - Bahrain, Jordan, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, UAE.
 - There were 8 last year
 - The prices are very different between countries
- Speeds below 256 kb/s are gradually being phased out in many Arab countries
 - Speeds < 256 kb/s are not considered broadband by OECD standards
- For both residential services, most countries are above the OECD average for the low speed basket
 - And are significantly more expensive than the cheapest OECD country, but below or on par with the most expensive
- All Arab countries within the 2.5 Mb/s medium speed basket are more expensive than the OECD average for residential broadband. For business broadband, only one Arab country, Morocco, falls below the OECD average
 - 11 operators offer services at this speed
 - The Arab average residential cost is 5.6 times higher than the average OECD cost. For business services, this is 22 times
 - The residential figure is skewed by particularly high costs in Mauritania and Syria. For business services, while Qatar, UAE, Bahrain are expensive, the Arab average is heavily skewed by the Tunisian cost.
- Only 5 operators offer residential service above 15 Mb/s, and only 4 offer business service
 - All are more expensive than the OECD average cost for this basket, and, with the exception of Morocco for the business service, are more expensive than the most expensive OECD operator
 - The business service for Morocco is much more on par with the OECD average result for this speed
- Many services are very basic and do not offer many additional facilities
- Only some of the countries apply usage-based prices



Fixed broadband time series analysis (2010 version of OECD baskets)

2010 OECD fixed broadband time series, residential low usage, low speed >256 kb/s basket

Residential fixed broadband, OECD low usage low speed basket, 10 hours / 2 GB per month, >256 kb/s Tariffs 2008-2011



Low usage: 2 GB and 10 hours per month, in 60 minute sessions.

Note that the horizontal axis has been manually adjusted, and the bars for Djibouti (2008) and Yemen (2008 and 2009) are not shown fully, as this would make the other results difficult to read.

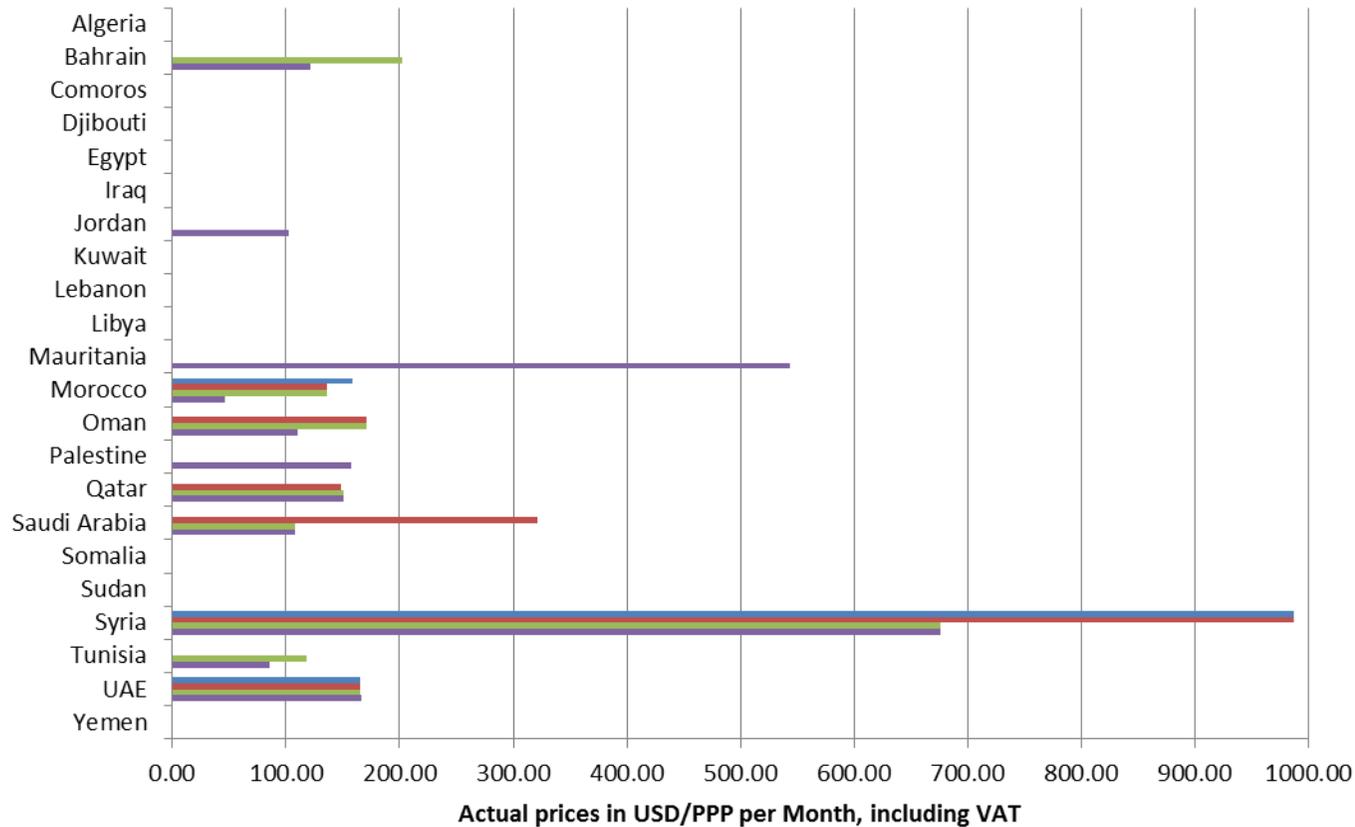
■ 2008
■ 2009
■ 2010
■ 2011



2010 OECD fixed broadband time series, residential low usage, medium speed >2.5 Mb/s basket

**Residential fixed broadband, OECD low usage medium speed basket, 15 hours / 6 GB per month, >2.5 Mb/s
Tariffs 2008-2011**

Low usage: 6 GB and 15 hours per month, in 60 minute sessions.



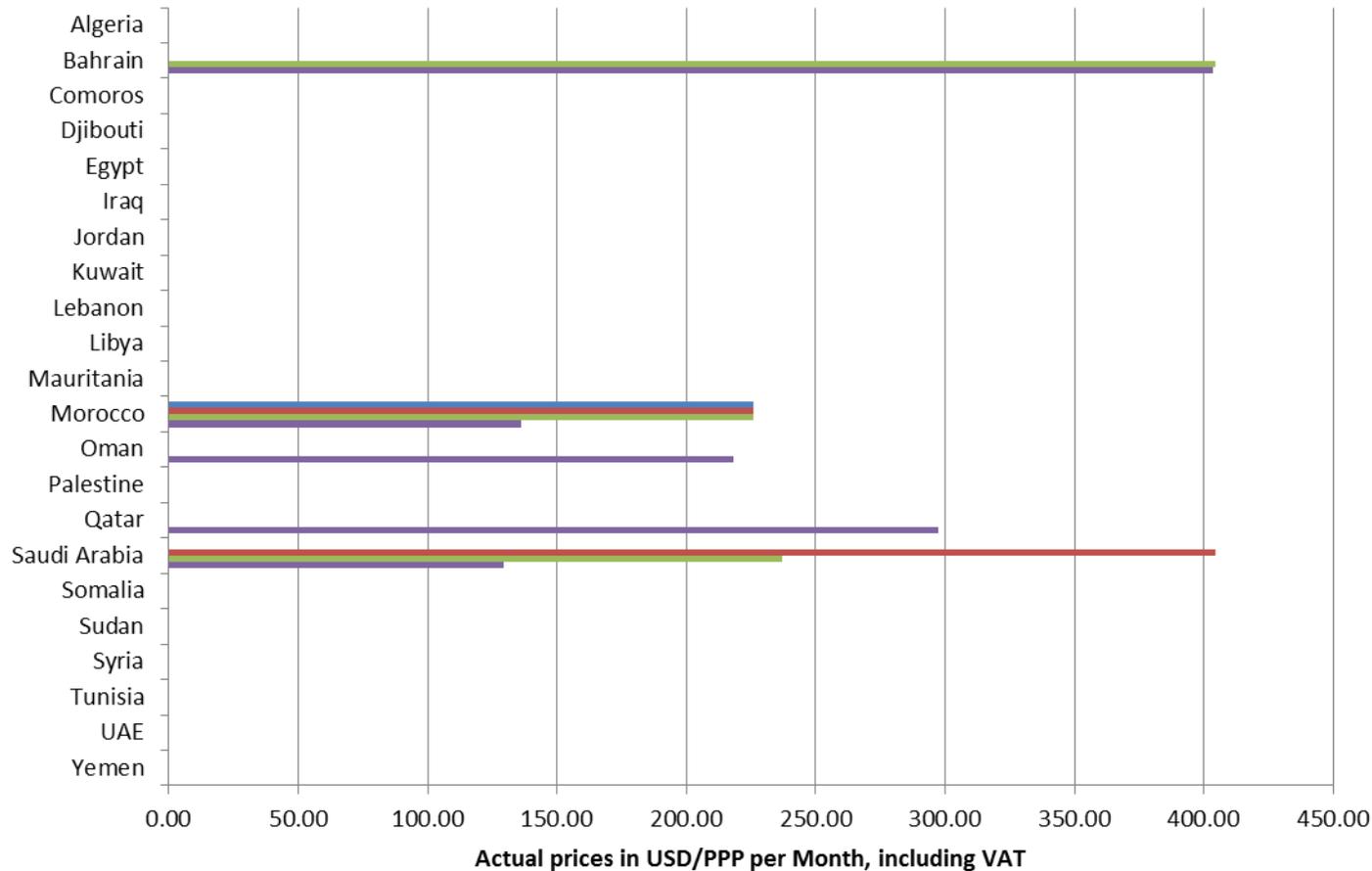
■ 2008
■ 2009
■ 2010
■ 2011



2010 OECD fixed broadband time series, residential low usage, high speed >15 Mb/s basket

Residential fixed broadband, OECD low usage high speed basket, 20 hours / 11 GB per month, >15 Mb/s Tariffs 2008-2011

Low usage: 11 GB and 20 hours per month, in 60 minute sessions.

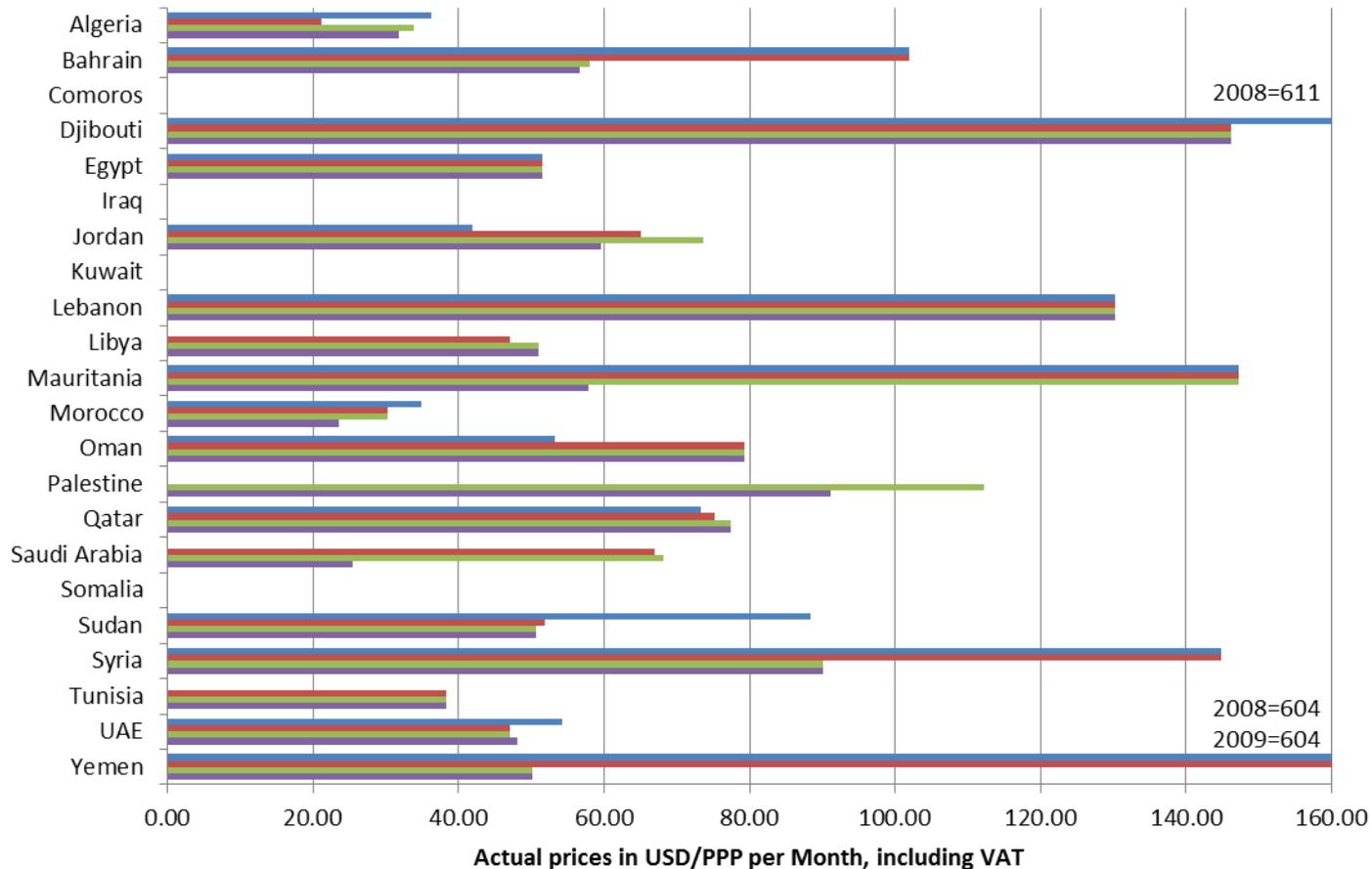


■ 2008
■ 2009
■ 2010
■ 2011



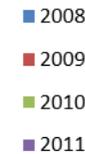
2010 OECD fixed broadband time series, residential high usage, low speed >256 kb/s basket

Residential fixed broadband, OECD high usage low speed basket, 30 hours / 6 GB per month, >256 kb/s Tariffs 2008-2011



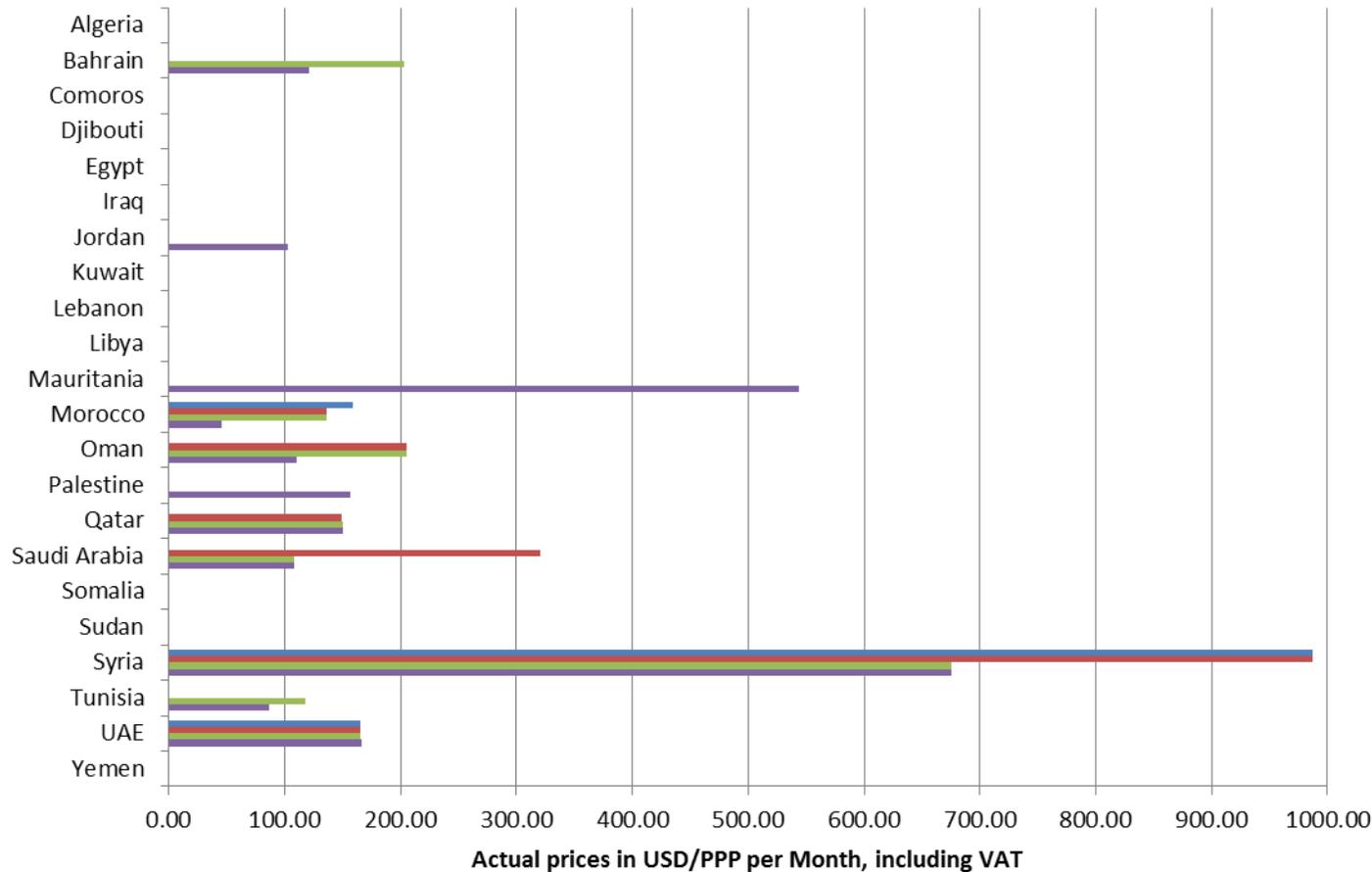
High usage: 6 GB and 30 hours per month, in 60 minute sessions.

Note that the horizontal axis has been manually adjusted, and the bars for Djibouti (2008) and Yemen (2008 and 2009) are not shown fully, as this would make the other results difficult to read.



2010 OECD fixed broadband time series, residential high usage, medium speed >2.5 Mb/s basket

Residential fixed broadband, OECD high usage medium speed basket, 45 hours / 18 GB per month, >2.5 Mb/s Tariffs 2008-2011



High usage: 18 GB and 45 hours per month, in 60 minute sessions.

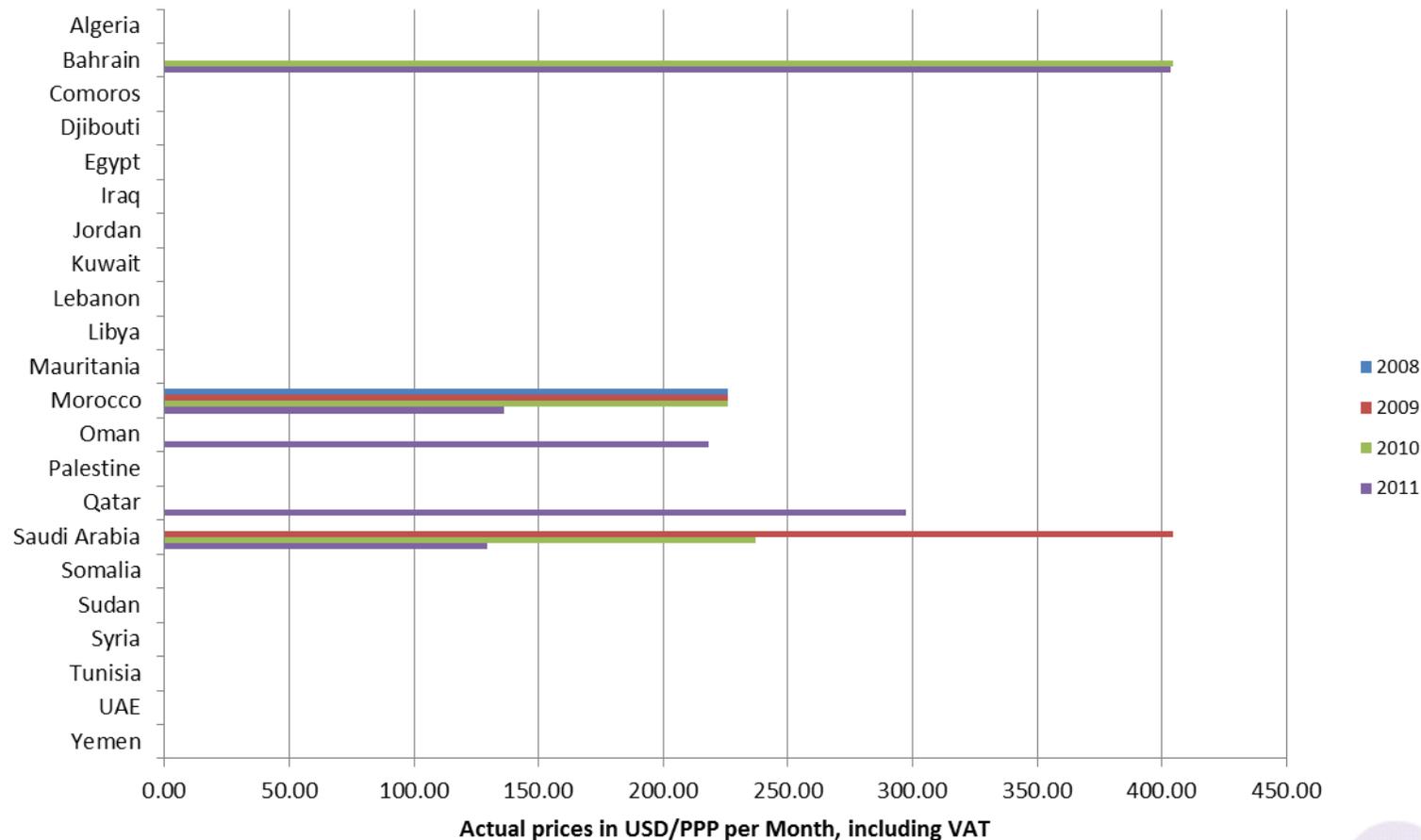
■ 2008
■ 2009
■ 2010
■ 2011



2010 OECD fixed broadband time series, residential high usage, high speed >15 Mb/s basket

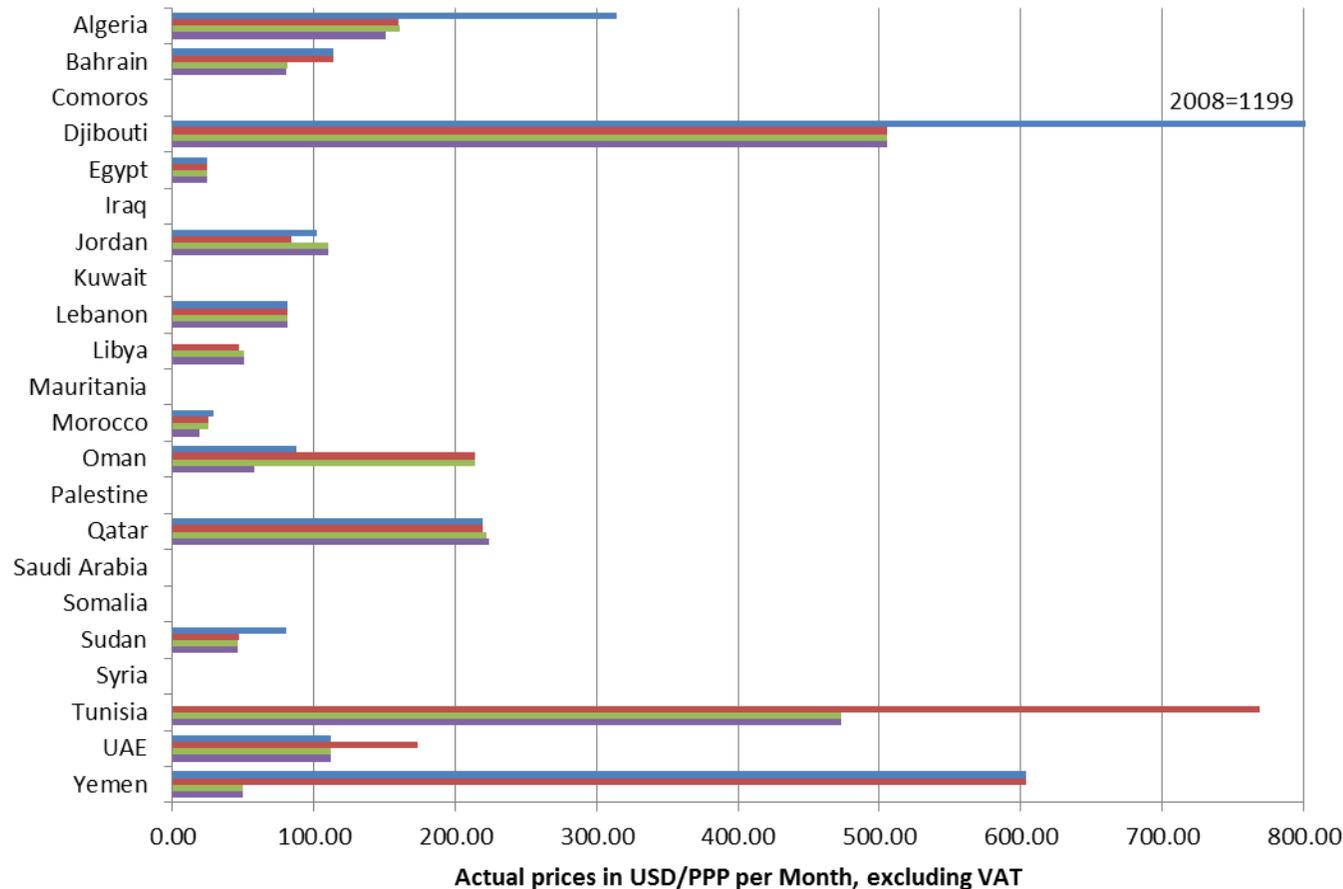
Residential fixed broadband, OECD high usage high speed basket, 60 hours / 33 GB per month, >15 Mb/s Tariffs 2008-2011

High usage: 33 GB and 60 hours per month, in 60 minute sessions.



2010 OECD fixed broadband time series, business low usage, low speed >256 kb/s basket

Business fixed broadband, OECD low usage low speed basket, 10 hours / 2 GB per month, >256 kb/s Tariffs 2008-2011



Low usage: 2 GB and 10 hours per month, in 60 minute sessions.

Note that the horizontal axis has been manually adjusted, and the bar for Djibouti (2008) is not shown fully, as this would make the other results difficult to read.

■ 2008
■ 2009
■ 2010
■ 2011

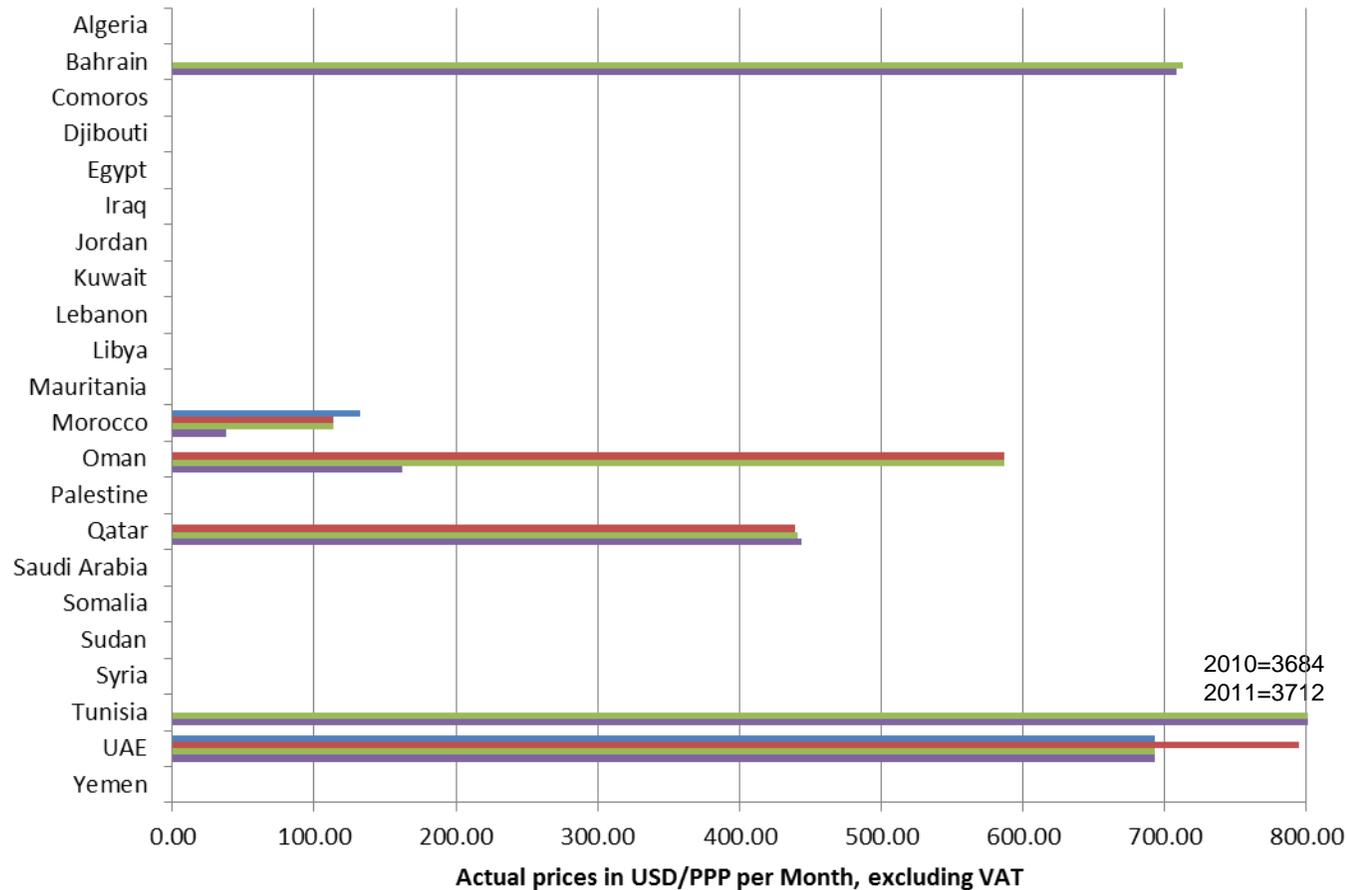


2010 OECD fixed broadband time series, business low usage, medium speed >2.5 Mb/s basket

Business fixed broadband, OECD low usage medium speed basket, 15 hours / 6 GB per month, >2.5 Mb/s Tariffs 2008-2011

Low usage: 6 GB and 15 hours per month, in 60 minute sessions.

Note that the horizontal axis has been manually adjusted, and the bars for Tunisia (2010 and 2011) are not shown fully, as this would make the other results difficult to read.



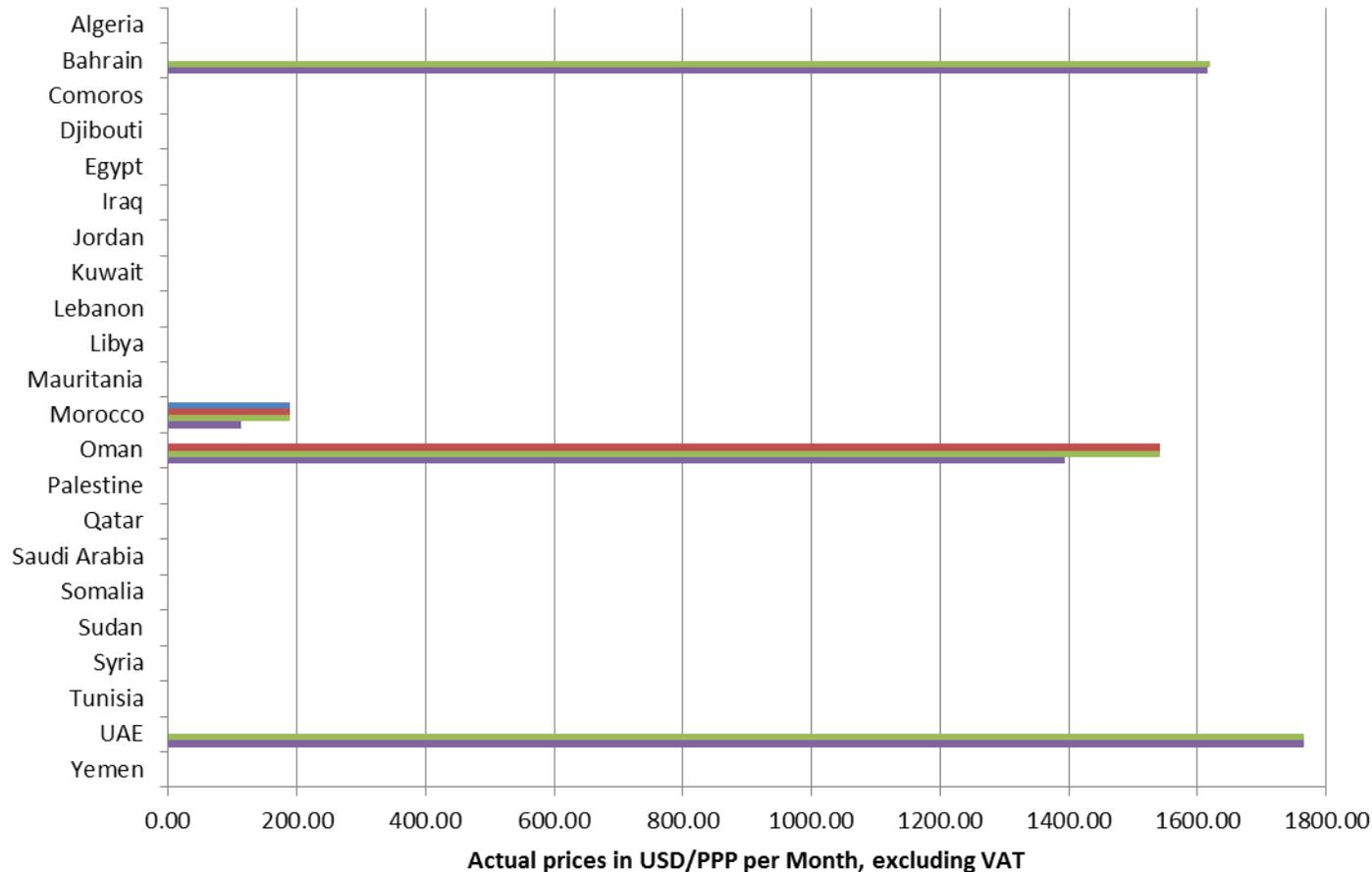
■ 2008
■ 2009
■ 2010
■ 2011



2010 OECD fixed broadband time series, business low usage, high speed >15 Mb/s basket

Business fixed broadband, OECD low usage high speed basket, 20 hours / 11 GB per month, >15 Mb/s Tariffs 2008-2011

Low usage: 11 GB and 20 hours per month, in 60 minute sessions.

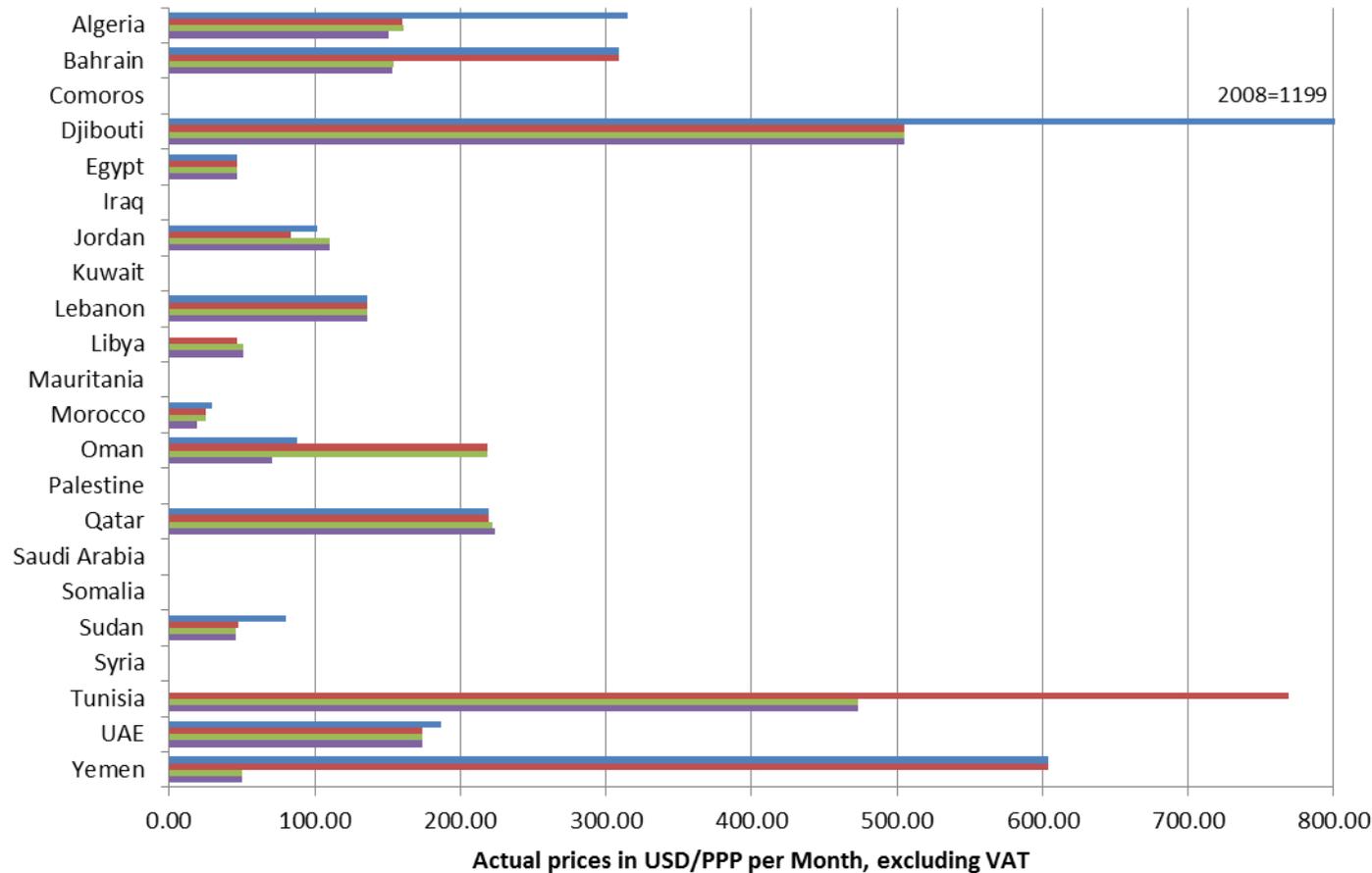


■ 2008
■ 2009
■ 2010
■ 2011



2010 OECD fixed broadband time series, business high usage, low speed >256 kb/s basket

Business fixed broadband, OECD high usage low speed basket, 30 hours / 6 GB per month, >256 kb/s Tariffs 2008-2011



High usage: 6 GB and 30 hours per month, in 60 minute sessions.

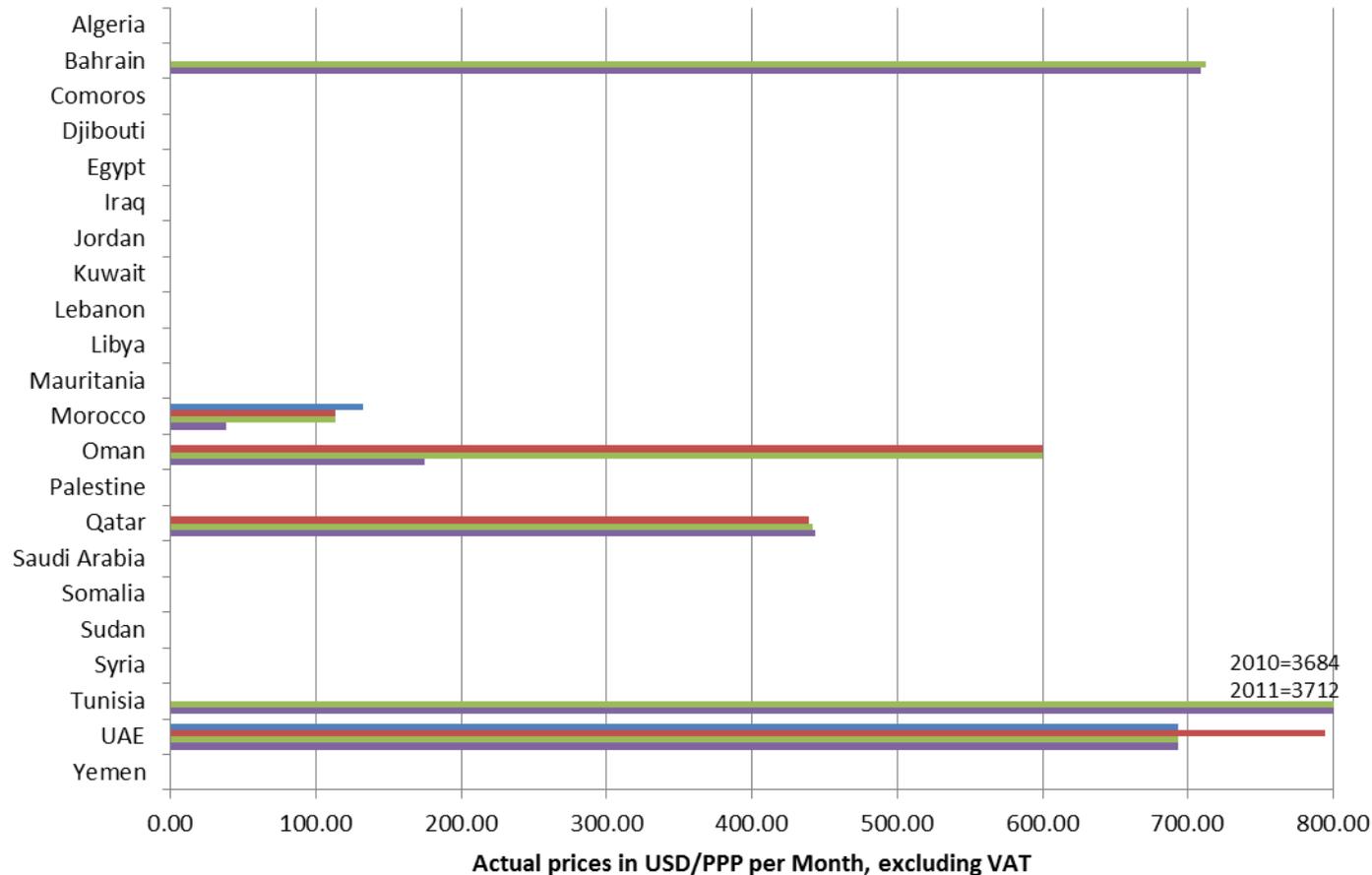
Note that the horizontal axis has been manually adjusted, and the bar for Djibouti (2008) is not shown fully, as this would make the other results difficult to read.

■ 2008
■ 2009
■ 2010
■ 2011



2010 OECD fixed broadband time series, business high usage, medium speed >2.5 Mb/s basket

Business fixed broadband, OECD high usage medium speed basket, 45 hours / 18 GB per month, >2.5 Mb/s Tariffs 2008-2011



High usage: 18 GB and 45 hours per month, in 60 minute sessions.

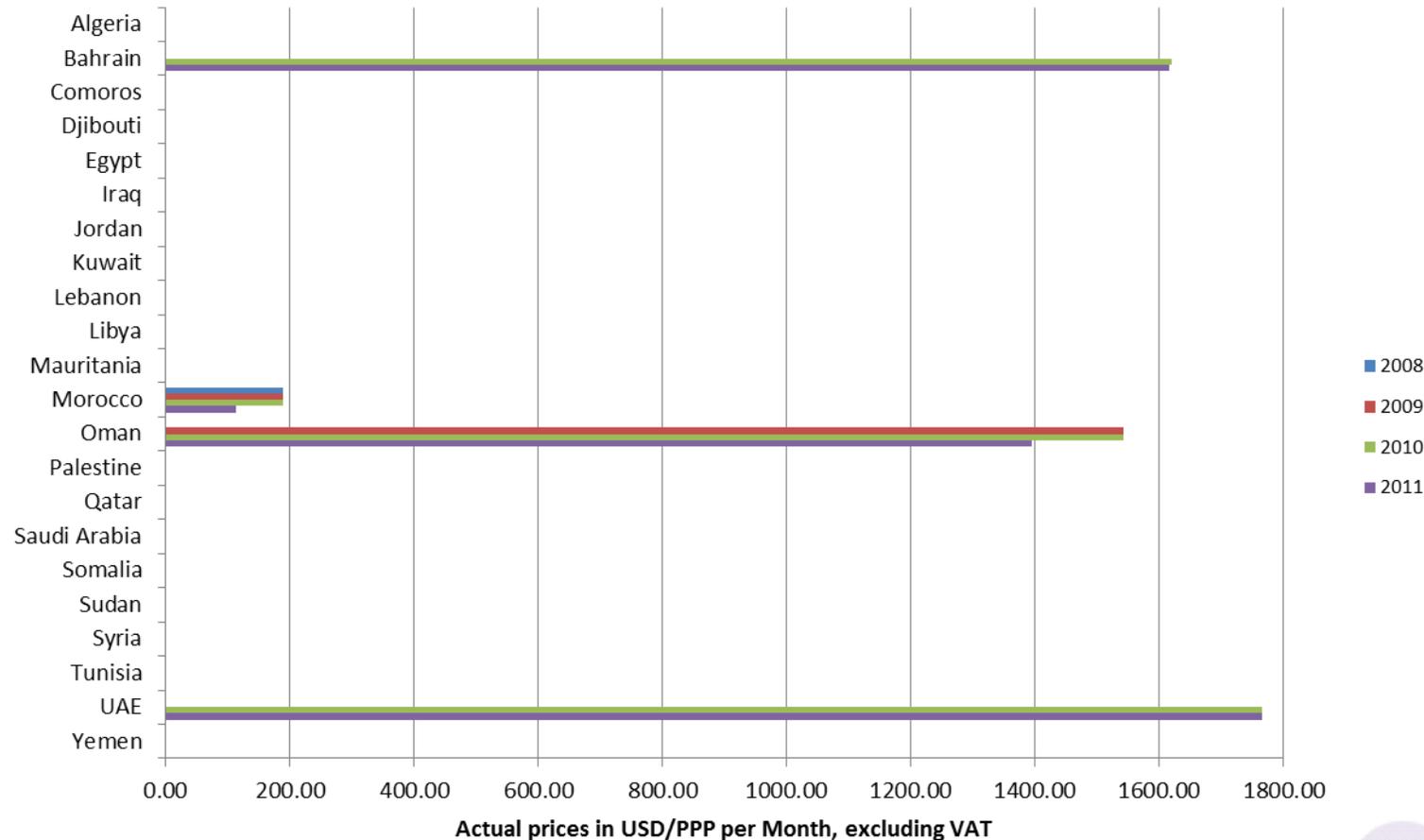
Note that the horizontal axis has been manually adjusted, and the bars for Tunisia (2010 and 2011) are not shown fully, as this would make the other results difficult to read

- 2008
- 2009
- 2010
- 2011



2010 OECD fixed broadband time series, business high usage, high speed >15 Mb/s basket

Business fixed broadband, OECD high usage high speed basket, 60 hours / 33 GB per month, >15 Mb/s Tariffs 2008-2011



High usage: 33 GB and 60 hours per month, in 60 minute sessions.



Observations from fixed broadband time series results

- There were price changes in a number of Arab countries:
 - Algeria: Some increases and decreases in monthly rental charges
 - Bahrain: Decrease in self install charges, rental charges and usage allowances for some speeds
 - Jordan: Decrease in monthly rental (business)
 - Mauritania: increased number of speeds, and overall rental charge decrease
 - Morocco: Removal of lower speed services, and overall reduction in rental charges
 - Oman: Change to packages, more speeds, and reductions in some rental charges
 - Qatar: Introduction of 16 Mb/s offering for residential customers
 - Saudi Arabia: change to range of speeds offered, and introduction of higher speeds
 - Tunisia: Rental charges decreased for some services
 - UAE: Some rental decreases and introduction of new double and triple play packages
- Prices in Arab countries have gone down significantly over the last year, particularly for residential services
 - The overall average decrease across the baskets for residential services was 13%, while the decrease for business services was 6%
- Data shown covers both residential and business prices separately. Prices for business services are typically much higher than residential services, and generally less available
 - The average business basket result is 778 USD, compared to 168 USD for residential services, more the 4.6 times as much.
- About half of the countries have seen price reductions in some way



Fixed broadband ranking tables, 2008-2011

Fixed broadband OECD residential low usage, low speed >256 kb/s basket ranking

Total results for OECD low usage low speed residential broadband basket, >256 kb/s

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	36.24	21.22	33.77	31.76
Bahrain	41.46	41.46	41.46	40.34
Comoros				
Djibouti	572.97	146.21	146.21	146.21
Egypt	27.26	27.26	27.26	27.26
Iraq				
Jordan	41.96	65.06	73.67	59.51
Kuwait				
Lebanon	69.80	69.80	69.80	69.80
Libya		47.01	51.02	51.02
Mauritania	147.18	147.18	147.18	57.81
Morocco	34.78	30.28	30.28	23.53
Oman	53.29	61.98	61.98	57.63
Palestine			112.33	91.07
Qatar	73.25	75.28	77.41	77.41
Saudi Arabia		66.93	68.08	25.46
Somalia				
Sudan	88.35	51.86	50.72	50.72
Syria	144.85	144.85	90.05	90.05
Tunisia		38.24	38.24	38.24
UAE	38.04	30.78	30.78	31.79
Yemen	603.66	604.28	50.19	50.19

Arab average	140.94	98.22	66.69	56.65
OECD average	N/A	N/A	N/A	31.75

■ Below Arab average
■ Above Arab average

Ranking for OECD low usage low speed residential broadband basket, >256 kb/s

	2008	2009	2010	2011
Algeria	3	1	4	4
Bahrain	5	6	6	7
Comoros	-	-	-	-
Djibouti	13	15	17	18
Egypt	1	2	1	3
Iraq	-	-	-	-
Jordan	6	10	13	13
Kuwait	-	-	-	-
Lebanon	8	12	12	14
Libya	-	7	9	10
Mauritania	12	16	18	12
Morocco	2	3	2	1
Oman	7	9	10	11
Palestine	-	-	16	17
Qatar	9	13	14	15
Saudi Arabia	-	11	11	2
Somalia	-	-	-	-
Sudan	10	8	8	9
Syria	11	14	15	16
Tunisia	-	5	5	6
UAE	4	4	3	5
Yemen	14	17	7	8

■ Least expensive
■ Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD residential low usage, medium speed >2.5 Mb/s basket ranking

Total results for OECD low usage medium speed residential broadband basket, >2.5 Mb/s

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria				
Bahrain			202.81	121.01
Comoros				
Djibouti				
Egypt				
Iraq				
Jordan				102.27
Kuwait				
Lebanon				
Libya				
Mauritania				543.89
Morocco	158.58	136.07	136.07	46.04
Oman		170.49	170.49	109.72
Palestine				156.86
Qatar		148.53	150.67	150.67
Saudi Arabia		321.03	107.66	107.66
Somalia				
Sudan				
Syria	987.04	987.04	675.55	675.55
Tunisia			117.91	86.04
UAE	165.11	165.11	165.11	166.12
Yemen				

Arab average	436.91	321.38	215.78	205.99
OECD average	N/A	N/A	N/A	37.03

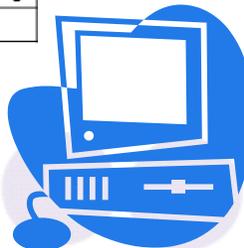
■ Below Arab average
■ Above Arab average

Ranking for OECD low usage medium speed residential broadband basket, >2.5 Mb/s

	2008	2009	2010	2011
Algeria	-	-	-	-
Bahrain	-	-	7	6
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	-	-	-	-
Iraq	-	-	-	-
Jordan	-	-	-	3
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	-	-	-
Mauritania	-	-	-	10
Morocco	1	1	3	1
Oman	-	4	6	5
Palestine	-	-	-	8
Qatar	-	2	4	7
Saudi Arabia	-	5	1	4
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	3	6	8	11
Tunisia	-	-	2	2
UAE	2	3	5	9
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD residential low usage, high speed >15 Mb/s basket ranking

Total results for OECD low usage high speed residential broadband basket, >15 Mb/s

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria				
Bahrain			404.50	403.38
Comoros				
Djibouti				
Egypt				
Iraq				
Jordan				
Kuwait				
Lebanon				
Libya				
Mauritania				
Morocco	226.11	226.11	226.11	136.07
Oman				218.24
Palestine				
Qatar				297.17
Saudi Arabia		404.34	237.21	129.32
Somalia				
Sudan				
Syria				
Tunisia				
UAE				
Yemen				

Arab average	226.11	315.23	289.27	236.84
OECD average	N/A	N/A	N/A	41.10

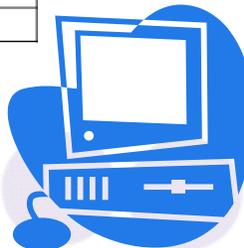
■ Below Arab average
■ Above Arab average

Ranking for OECD low usage high speed residential broadband basket, >15 Mb/s

	2008	2009	2010	2011
Algeria	-	-	-	-
Bahrain	-	-	3	5
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	-	-	-	-
Iraq	-	-	-	-
Jordan	-	-	-	-
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	-	-	-
Mauritania	-	-	-	-
Morocco	1	1	1	2
Oman	-	-	-	3
Palestine	-	-	-	-
Qatar	-	-	-	4
Saudi Arabia	-	2	2	1
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	-	-	-	-
UAE	-	-	-	-
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD residential high usage, low speed >256 kb/s basket ranking

Total results for OECD high usage low speed residential broadband basket, >256 kb/s

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria	36.24	21.22	33.77	31.76
Bahrain	101.97	101.97	57.98	56.67
Comoros				
Djibouti	611.38	146.21	146.21	146.21
Egypt	51.49	51.49	51.49	51.49
Iraq				
Jordan	41.96	65.06	73.67	59.51
Kuwait				
Lebanon	130.26	130.26	130.26	130.26
Libya		47.01	51.02	51.02
Mauritania	147.18	147.18	147.18	57.81
Morocco	34.78	30.28	30.28	23.53
Oman	53.29	79.34	79.34	79.34
Palestine			112.33	91.07
Qatar	73.25	75.28	77.41	77.41
Saudi Arabia		66.93	68.08	25.46
Somalia				
Sudan	88.35	51.86	50.72	50.72
Syria	144.85	144.85	90.05	90.05
Tunisia		38.24	38.24	38.24
UAE	54.32	47.06	47.06	48.07
Yemen	603.66	604.28	50.19	50.19

Arab average	155.21	108.74	74.18	64.38
OECD average	N/A	N/A	N/A	32.31

■ Below Arab average
■ Above Arab average

Ranking for OECD high usage low speed residential broadband basket, >256 kb/s

	2008	2009	2010	2011
Algeria	2	1	2	3
Bahrain	9	12	9	10
Comoros	-	-	-	-
Djibouti	14	15	17	18
Egypt	4	6	8	9
Iraq	-	-	-	-
Jordan	3	8	11	12
Kuwait	-	-	-	-
Lebanon	10	13	16	17
Libya	-	4	7	8
Mauritania	12	16	18	11
Morocco	1	2	1	1
Oman	5	11	13	14
Palestine	-	-	15	16
Qatar	7	10	12	13
Saudi Arabia	-	9	10	2
Somalia	-	-	-	-
Sudan	8	7	6	7
Syria	11	14	14	15
Tunisia	-	3	3	4
UAE	6	5	4	5
Yemen	13	17	5	6

■ Least expensive
■ Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD residential high usage, medium speed >2.5 Mb/s basket ranking

Total results for OECD high usage medium speed residential broadband basket, >2.5 Mb/s

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria				
Bahrain			202.81	121.01
Comoros				
Djibouti				
Egypt				
Iraq				
Jordan				102.27
Kuwait				
Lebanon				
Libya				
Mauritania				543.89
Morocco	158.58	136.07	136.07	46.04
Oman		205.22	205.22	109.72
Palestine				156.86
Qatar		148.53	150.67	150.67
Saudi Arabia		321.03	107.66	107.66
Somalia				
Sudan				
Syria	987.04	987.04	675.55	675.55
Tunisia			117.91	86.04
UAE	165.11	165.11	165.11	166.12
Yemen				

Arab average	436.91	327.17	220.12	205.99
OECD average	N/A	N/A	N/A	37.75

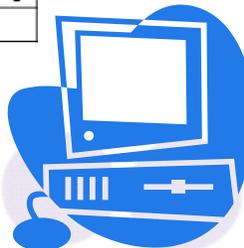
■ Below Arab average
■ Above Arab average

Ranking for OECD high usage medium speed residential broadband basket, >2.5 Mb/s

	2008	2009	2010	2011
Algeria	-	-	-	-
Bahrain	-	-	6	6
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	-	-	-	-
Iraq	-	-	-	-
Jordan	-	-	-	3
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	-	-	-
Mauritania	-	-	-	10
Morocco	1	1	3	1
Oman	-	4	7	5
Palestine	-	-	-	8
Qatar	-	2	4	7
Saudi Arabia	-	5	1	4
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	3	6	8	11
Tunisia	-	-	2	2
UAE	2	3	5	9
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD residential high usage, high speed >15 Mb/s basket ranking

Total results for OECD high usage high speed residential broadband basket, >15 Mb/s

Results in USD/PPP including VAT, lowest per country

	2008	2009	2010	2011
Algeria				
Bahrain			404.50	403.38
Comoros				
Djibouti				
Egypt				
Iraq				
Jordan				
Kuwait				
Lebanon				
Libya				
Mauritania				
Morocco	226.11	226.11	226.11	136.07
Oman				218.24
Palestine				
Qatar				297.17
Saudi Arabia		404.34	237.21	129.32
Somalia				
Sudan				
Syria				
Tunisia				
UAE				
Yemen				

Arab average	226.11	315.23	289.27	236.84
OECD average	N/A	N/A	N/A	41.50

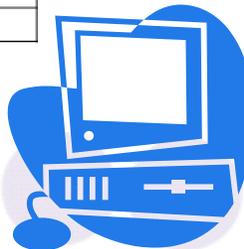
■ Below Arab average
■ Above Arab average

Ranking for OECD high usage high speed residential broadband basket, >15 Mb/s

	2008	2009	2010	2011
Algeria	-	-	-	-
Bahrain	-	-	3	5
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	-	-	-	-
Iraq	-	-	-	-
Jordan	-	-	-	-
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	-	-	-
Mauritania	-	-	-	-
Morocco	1	1	1	2
Oman	-	-	-	3
Palestine	-	-	-	-
Qatar	-	-	-	4
Saudi Arabia	-	2	2	1
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	-	-	-	-
UAE	-	-	-	-
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD business low usage, low speed >256 kb/s basket ranking

Total results for OECD low usage low speed business broadband basket, >256 kb/s

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria	314.54	159.92	161.24	150.95
Bahrain	114.07	114.07	81.80	80.68
Comoros				
Djibouti	1,198.74	505.40	505.40	505.40
Egypt	24.78	24.78	24.78	24.78
Iraq				
Jordan	101.73	83.67	109.91	109.91
Kuwait				
Lebanon	81.35	81.35	81.35	81.35
Libya		47.01	51.02	51.02
Mauritania				
Morocco	28.99	25.23	25.23	19.43
Oman	88.02	213.90	213.90	57.63
Palestine				
Qatar	219.76	219.76	221.78	223.92
Saudi Arabia				
Somalia				
Sudan	80.32	47.15	46.11	46.11
Syria				
Tunisia		769.30	473.00	473.00
UAE	112.15	173.87	112.15	112.15
Yemen	603.66	604.28	50.19	50.19

Arab average	247.34	219.26	154.13	141.89
OECD average	N/A	N/A	N/A	37.08

■ Below Arab average
■ Above Arab average

Ranking for OECD low usage low speed business broadband basket, >256 kb/s

	2008	2009	2010	2011
Algeria	10	8	10	11
Bahrain	8	7	7	7
Comoros	-	-	-	-
Djibouti	12	12	14	14
Egypt	1	1	1	2
Iraq	-	-	-	-
Jordan	6	6	8	9
Kuwait	-	-	-	-
Lebanon	4	5	6	8
Libya	-	3	5	5
Mauritania	-	-	-	-
Morocco	2	2	2	1
Oman	5	10	11	6
Palestine	-	-	-	-
Qatar	9	11	12	12
Saudi Arabia	-	-	-	-
Somalia	-	-	-	-
Sudan	3	4	3	3
Syria	-	-	-	-
Tunisia	-	14	13	13
UAE	7	9	9	10
Yemen	11	13	4	4

■ Least expensive
■ Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD business low usage, medium speed >2.5 Mb/s basket ranking

Total results for OECD low usage medium speed business broadband basket, >2.5 Mb/s

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria				
Bahrain			712.64	708.71
Comoros				
Djibouti				
Egypt				
Iraq				
Jordan				
Kuwait				
Lebanon				
Libya				
Mauritania				
Morocco	132.15	113.39	113.36	38.19
Oman		587.20	587.20	161.81
Palestine				
Qatar		439.52	441.54	443.68
Saudi Arabia				
Somalia				
Sudan				
Syria				
Tunisia			3,683.85	3,711.73
UAE	693.05	794.71	693.05	693.05
Yemen				

Arab average	412.60	483.71	1,038.61	959.53
OECD average	N/A	N/A	N/A	43.31

■ Below Arab average
■ Above Arab average

Comparable OECD data is not available for 2008, 2009 and 2010

Ranking for OECD low usage medium speed business broadband basket, >2.5 Mb/s

	2008	2009	2010	2011
Algeria	-	-	-	-
Bahrain	-	-	5	5
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	-	-	-	-
Iraq	-	-	-	-
Jordan	-	-	-	-
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	-	-	-
Mauritania	-	-	-	-
Morocco	1	1	1	1
Oman	-	3	3	2
Palestine	-	-	-	-
Qatar	-	2	2	3
Saudi Arabia	-	-	-	-
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	-	-	6	6
UAE	2	4	4	4
Yemen	-	-	-	-

■ Least expensive
■ Most expensive



Fixed broadband OECD business low usage, high speed >15 Mb/s basket ranking

Total results for OECD low usage high speed business broadband basket, >15 Mb/s

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria				
Bahrain			1,620.24	1,616.32
Comoros				
Djibouti				
Egypt				
Iraq				
Jordan				
Kuwait				
Lebanon				
Libya				
Mauritania				
Morocco	188.43	188.43	188.43	113.22
Oman		1,542.14	1,542.14	1,394.56
Palestine				
Qatar				
Saudi Arabia				
Somalia				
Sudan				
Syria				
Tunisia				
UAE			1,765.92	1,765.92
Yemen				

Arab average	188.43	865.28	1,279.18	1,222.50
OECD average	N/A	N/A	N/A	61.38

Below Arab average
 Above Arab average

Ranking for OECD low usage high speed business broadband basket, >15 Mb/s

	2008	2009	2010	2011
Algeria	-	-	-	-
Bahrain	-	-	3	3
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	-	-	-	-
Iraq	-	-	-	-
Jordan	-	-	-	-
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	-	-	-
Mauritania	-	-	-	-
Morocco	1	1	1	1
Oman	-	2	2	2
Palestine	-	-	-	-
Qatar	-	-	-	-
Saudi Arabia	-	-	-	-
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	-	-	-	-
UAE	-	-	4	4
Yemen	-	-	-	-

Least expensive
 Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD business high usage, low speed >256 kb/s basket ranking

Total results for OECD high usage low speed business broadband basket, >256 kb/s

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria	314.54	159.92	161.24	150.95
Bahrain	309.26	309.26	154.08	152.96
Comoros				
Djibouti	1,198.74	505.40	505.40	505.40
Egypt	46.81	46.81	46.81	46.81
Iraq				
Jordan	101.73	83.67	109.91	109.91
Kuwait				
Lebanon	136.31	136.31	136.31	136.31
Libya		47.01	51.02	51.02
Mauritania				
Morocco	28.99	25.23	25.23	19.43
Oman	88.02	218.24	218.24	70.66
Palestine				
Qatar	219.76	219.76	221.78	223.92
Saudi Arabia				
Somalia				
Sudan	80.32	47.15	46.11	46.11
Syria				
Tunisia		769.30	473.00	473.00
UAE	186.50	173.87	173.87	173.87
Yemen	603.66	604.28	50.19	50.19

Arab average	276.22	239.01	169.51	157.89
OECD average	N/A	N/A	N/A	37.43

Below Arab average
 Above Arab average

Ranking for OECD high usage low speed business broadband basket, >256 kb/s

	2008	2009	2010	2011
Algeria	10	7	9	9
Bahrain	9	11	8	10
Comoros	-	-	-	-
Djibouti	12	12	14	14
Egypt	2	2	3	3
Iraq	-	-	-	-
Jordan	5	5	6	7
Kuwait	-	-	-	-
Lebanon	6	6	7	8
Libya	-	3	5	5
Mauritania	-	-	-	-
Morocco	1	1	1	1
Oman	4	9	11	6
Palestine	-	-	-	-
Qatar	8	10	12	12
Saudi Arabia	-	-	-	-
Somalia	-	-	-	-
Sudan	3	4	2	2
Syria	-	-	-	-
Tunisia	-	14	13	13
UAE	7	8	10	11
Yemen	11	13	4	4

Least expensive
 Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD business high usage, medium speed >2.5 Mb/s basket ranking

Total results for OECD high usage medium speed business broadband basket, >2.5 Mb/s

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria				
Bahrain			712.64	708.71
Comoros				
Djibouti				
Egypt				
Iraq				
Jordan				
Kuwait				
Lebanon				
Libya				
Mauritania				
Morocco	132.15	113.39	113.36	38.19
Oman		600.22	600.22	174.83
Palestine				
Qatar		439.52	441.54	443.68
Saudi Arabia				
Somalia				
Sudan				
Syria				
Tunisia			3,683.85	3,711.73
UAE	693.05	794.71	693.05	693.05
Yemen				

Arab average	412.60	486.96	1,040.78	961.70
OECD average	N/A	N/A	N/A	54.11

■ Below Arab average
■ Above Arab average

Ranking for OECD high usage medium speed business broadband basket, >2.5 Mb/s

	2008	2009	2010	2011
Algeria	-	-	-	-
Bahrain	-	-	5	5
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	-	-	-	-
Iraq	-	-	-	-
Jordan	-	-	-	-
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	-	-	-
Mauritania	-	-	-	-
Morocco	1	1	1	1
Oman	-	3	3	2
Palestine	-	-	-	-
Qatar	-	2	2	3
Saudi Arabia	-	-	-	-
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	-	-	6	6
UAE	2	4	4	4
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Fixed broadband OECD business high usage, high speed >15 Mb/s basket ranking

Total results for OECD high usage high speed business broadband basket, >15 Mb/s

Results in USD/PPP excluding VAT, lowest per country

	2008	2009	2010	2011
Algeria				
Bahrain			1,620.24	1,616.32
Comoros				
Djibouti				
Egypt				
Iraq				
Jordan				
Kuwait				
Lebanon				
Libya				
Mauritania				
Morocco	188.43	188.43	188.43	113.22
Oman		1,542.14	1,542.14	1,394.56
Palestine				
Qatar				
Saudi Arabia				
Somalia				
Sudan				
Syria				
Tunisia				
UAE			1,765.92	1,765.92
Yemen				

Arab average	188.43	865.28	1,279.18	1,222.50
OECD average	N/A	N/A	N/A	62.29

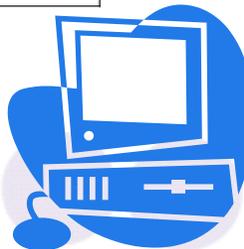
■ Below Arab average
■ Above Arab average

Ranking for OECD high usage high speed business broadband basket, >15 Mb/s

	2008	2009	2010	2011
Algeria	-	-	-	-
Bahrain	-	-	3	3
Comoros	-	-	-	-
Djibouti	-	-	-	-
Egypt	-	-	-	-
Iraq	-	-	-	-
Jordan	-	-	-	-
Kuwait	-	-	-	-
Lebanon	-	-	-	-
Libya	-	-	-	-
Mauritania	-	-	-	-
Morocco	1	1	1	1
Oman	-	2	2	2
Palestine	-	-	-	-
Qatar	-	-	-	-
Saudi Arabia	-	-	-	-
Somalia	-	-	-	-
Sudan	-	-	-	-
Syria	-	-	-	-
Tunisia	-	-	-	-
UAE	-	-	4	4
Yemen	-	-	-	-

■ Least expensive
■ Most expensive

Comparable OECD data is not available for 2008, 2009 and 2010



Mobile broadband basket 2011 results

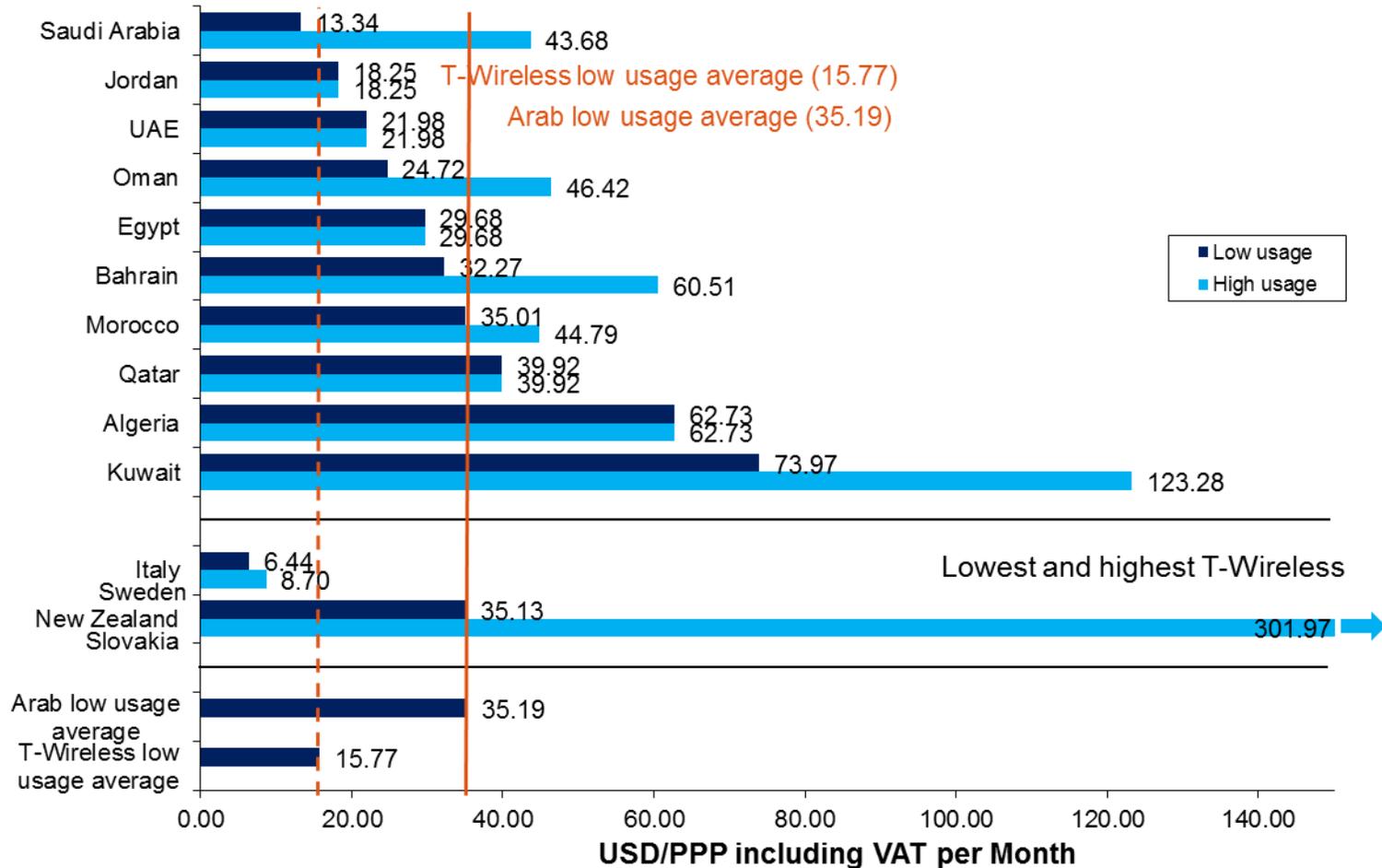
Mobile broadband data issues

- Tariff data was researched from operator websites in March 2011.
- No data was available for: Comoros, Djibouti, Iraq, Lebanon, Libya, Mauritania, Palestine, Somalia, Sudan, Syria, Tunisia and Yemen
- For countries where data was available, up to two largest operators were considered
- Total monthly cost calculated based on two usage baskets from Teligen's T-Wireless mobile broadband service:
 - **Low usage:** 1 GB and 5 hours per month, in 15 minute sessions.
 - **High usage:** 6 GB and 30 hours per month, in 30 minute sessions.
- Two speeds were considered for each usage level:
 - **Medium speed:** 2-8 Mb/s
 - **High speed:** >8 Mb/s
- Results were compared to 22 other countries, encompassing Europe, Australia, Egypt, India, New Zealand and USA, using the same usage baskets described above
 - There is no OECD basket agreed for mobile broadband as yet



Residential medium speed mobile broadband (2-8 Mb/s)

Mobile broadband residential medium speed basket, 2-8 Mb/s
Tariffs as of March 2011

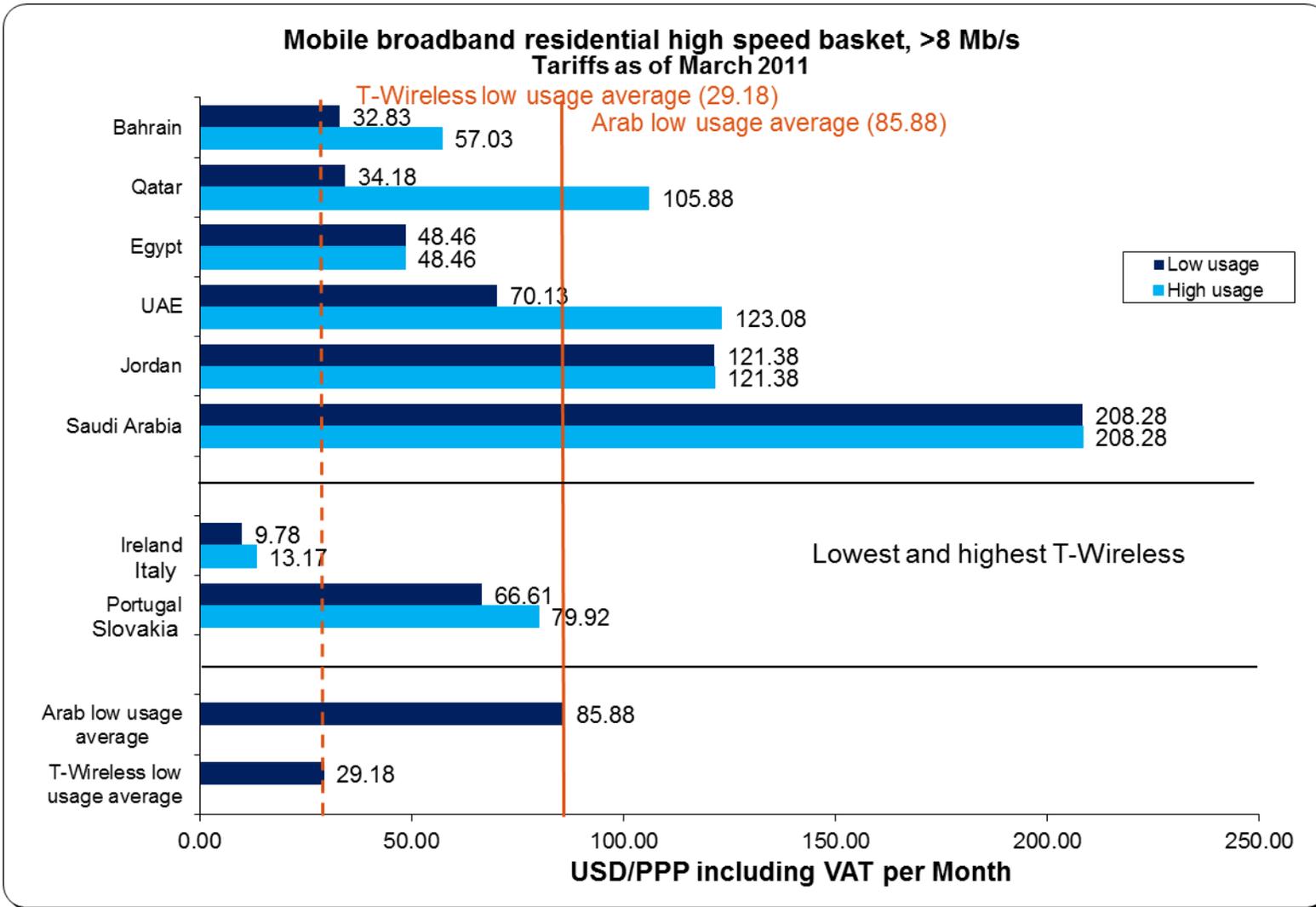


Note that the horizontal axis has been manually adjusted, and the bar for Slovakia (T-Wireless data) is not shown fully, as this would make the other results difficult to read

Mobile broadband is much more likely to vary with usage than fixed broadband



Residential high speed mobile broadband (>8 Mb/s)

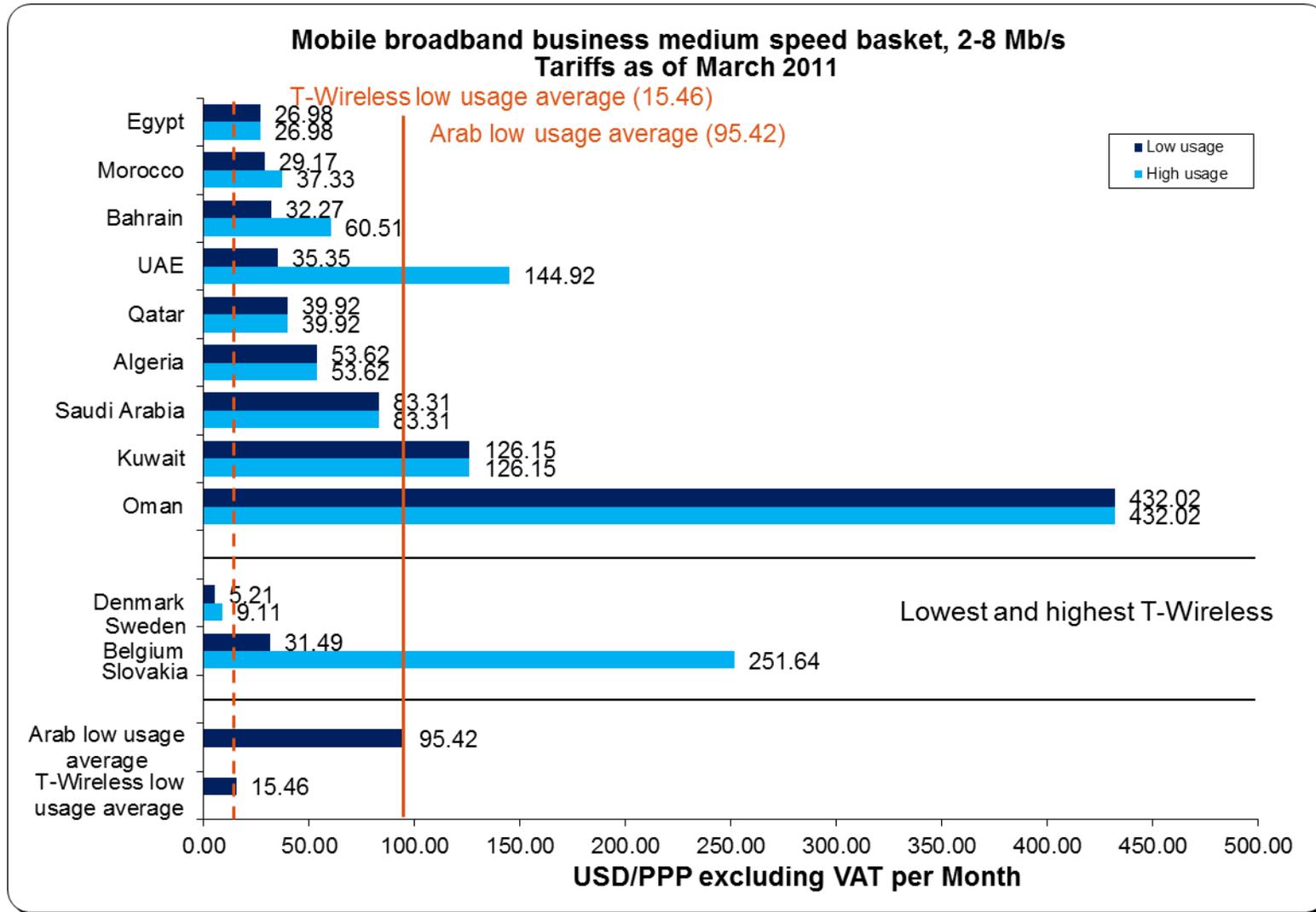


Fewer Arab providers offer speeds above 8 Mb/s

Mobile broadband is much more likely to vary with usage than fixed broadband



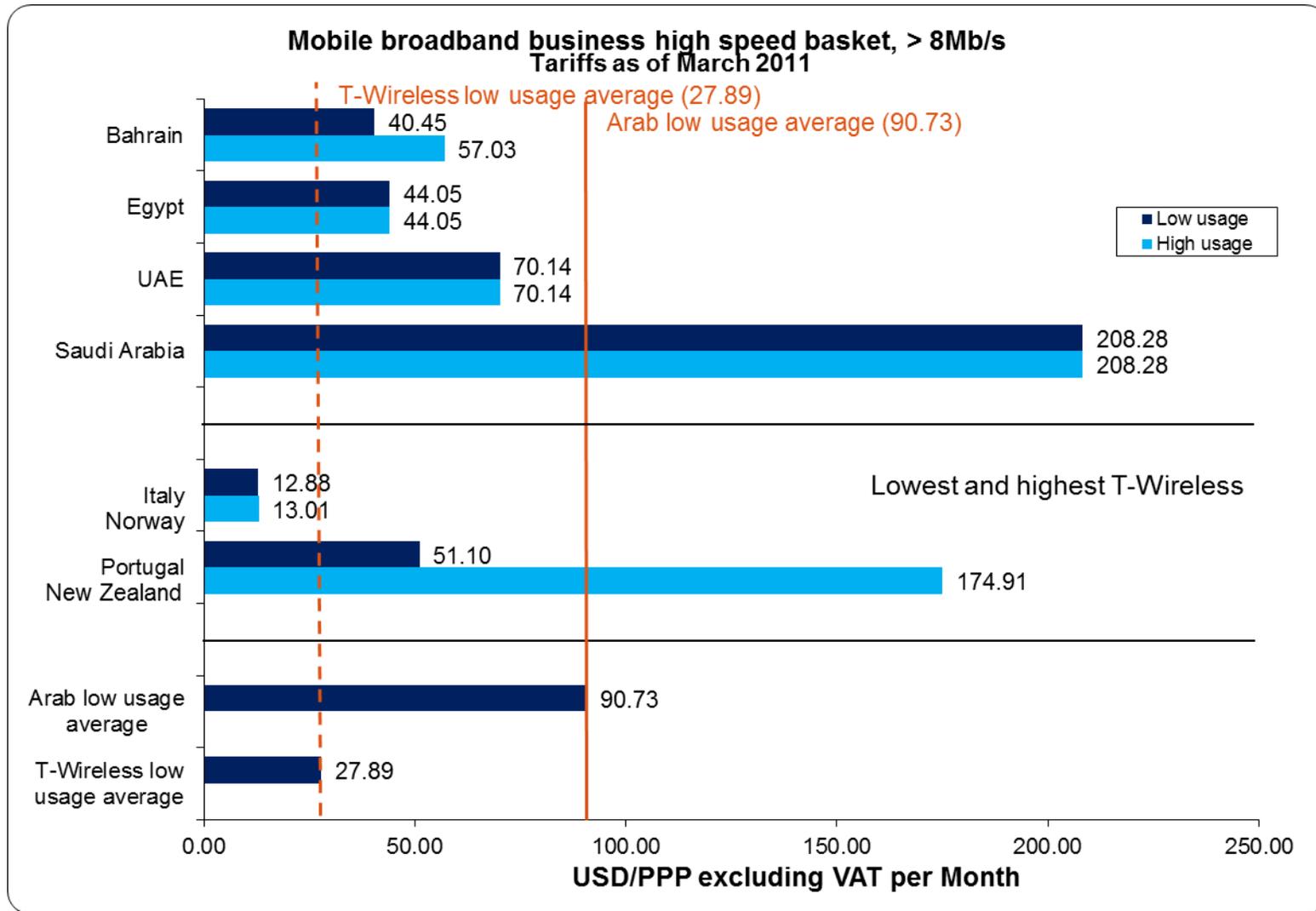
Business medium speed mobile broadband (2-8 Mb/s)



Mobile broadband is much more likely to vary with usage than fixed broadband



Business high speed mobile broadband (>8 Mb/s)



Fewer Arab providers offer speeds above 8 Mb/s

Mobile broadband is much more likely to vary with usage than fixed broadband



Observations from mobile broadband basket results

- Mobile broadband services are not available in over half of the Arab countries
 - In those countries where they are offered, the most common speed is 2-8Mb/s
 - Although there are a number of offers at speeds over 8 Mb/s (e.g. Bahrain)
 - Some operators also offer services <1 Mb/s, a speed which is generally not offered in T-Wireless countries, with the exception of India
- Bahrain and Egypt are generally amongst the lowest prices for mobile broadband for low usage, both residential and business offerings, with the exception of medium speed, low usage residential services, where Saudi Arabia offers the cheapest service, followed by Jordan and UAE
 - Speed of service and usage impacts the rankings, however
- Apart from Saudi Arabia, for medium speed residential services, no Arab country falls below the T-Wireless (low usage) average, although several are not significantly higher
- On average, mobile broadband services (low usage) in the Arab countries are between 2.2 and 6.2 times more expensive than those covered within T-Wireless

Arab average/T-Wireless average (low usage)

	2-8 Mb/s	>8 Mb/s
Arab/T-Wireless residential	2.23	2.94
Arab/T-Wireless business	6.17	3.25

- In Arab countries, for high speeds (>8Mb/s), the business service prices are more in line with residential service prices, than for lower speeds. For T-Wireless countries prices for residential and business services are broadly the same

	2-8 Mb/s	>8 Mb/s
Arab business/residential	2.71	1.06
T-Wireless business/residential	0.98	0.96



Mobile broadband ranking tables, 2011

Residential medium speed mobile broadband (2-8 Mb/s) ranking

Mobile broadband residential medium speed basket, 2-8 Mb/s, lowest per country

Low usage 5 hours/1 GB per month, 15 days/month

	USD/PPP incl VAT	Ranking
Algeria	62.73	9
Bahrain	32.27	6
Egypt	29.68	5
Jordan	18.25	2
Kuwait	73.97	10
Morocco	35.01	7
Oman	24.72	4
Qatar	39.92	8
Saudi Arabia	13.34	1
UAE	21.98	3

Arab average	35.19
T-Wireless average	15.77

High usage 30 hours/6 GB per month, 30 days/month

	USD/PPP incl VAT	Ranking
Algeria	62.73	9
Bahrain	60.51	8
Egypt	29.68	3
Jordan	18.25	1
Kuwait	123.28	10
Morocco	44.79	6
Oman	46.42	7
Qatar	39.92	4
Saudi Arabia	43.68	5
UAE	21.98	2

Arab average	49.12
T-Wireless average	58.59

Key for basket results

 Below Arab average
 Above Arab average

Key for rankings

 Least expensive
 Most expensive



Residential high speed mobile broadband (>8 Mb/s) ranking

Mobile broadband residential high speed basket, >8 Mb/s, lowest per country

Low usage 5 hours/1 GB per month, 15 days/month

	USD/PPP incl VAT	Ranking
Bahrain	32.83	1
Egypt	48.46	3
Jordan	121.38	5
Qatar	34.18	2
Saudi Arabia	208.28	6
UAE	70.13	4

Arab average	85.88
T-Wireless average	29.18

High usage 30 hours/6 GB per month, 30 days/month

	USD/PPP incl VAT	Ranking
Bahrain	57.03	2
Egypt	48.46	1
Jordan	121.38	4
Qatar	105.88	3
Saudi Arabia	208.28	6
UAE	123.08	5

Arab average	110.68
T-Wireless average	40.19

Key for basket results

	Below Arab average
	Above Arab average

Key for rankings

	Least expensive
	Most expensive



Business medium speed mobile broadband (2-8 Mb/s) ranking

Mobile broadband business medium speed basket, 2-8 Mb/s, lowest per country

Low usage 5 hours/1 GB per month, 15 days/month

	USD/PPP excl VAT	Ranking
Algeria	53.62	6
Bahrain	32.27	3
Egypt	26.98	1
Kuwait	126.15	8
Morocco	29.17	2
Oman	432.02	9
Qatar	39.92	5
Saudi Arabia	83.31	7
UAE	35.35	4

Arab average	95.42
T-Wireless average	15.46

High usage 30 hours/6 GB per month, 30 days/month

	USD/PPP excl VAT	Ranking
Algeria	53.62	4
Bahrain	60.51	5
Egypt	26.98	1
Kuwait	126.15	7
Morocco	37.33	2
Oman	432.02	9
Qatar	39.92	3
Saudi Arabia	83.31	6
UAE	144.92	8

Arab average	111.64
T-Wireless average	63.29

Key for basket results

 Below Arab average
 Above Arab average

Key for rankings

 Least expensive
 Most expensive



Business high speed mobile broadband (>8 Mb/s) ranking

Mobile broadband business high speed basket, > 8Mb/s, lowest per country

Low usage 5 hours/1 GB per month, 15 days/month

	USD/PPP excl VAT	Ranking
Bahrain	40.45	1
Egypt	44.05	2
Saudi Arabia	208.28	4
UAE	70.14	3

Arab average	90.73
T-Wireless average	27.89

High usage 30 hours/6 GB per month, 30 days/month

	USD/PPP excl VAT	Ranking
Bahrain	57.03	2
Egypt	44.05	1
Saudi Arabia	208.28	4
UAE	70.14	3

Arab average	94.88
T-Wireless average	50.70

Key for basket results

 Below Arab average
 Above Arab average

Key for rankings

 Least expensive
 Most expensive



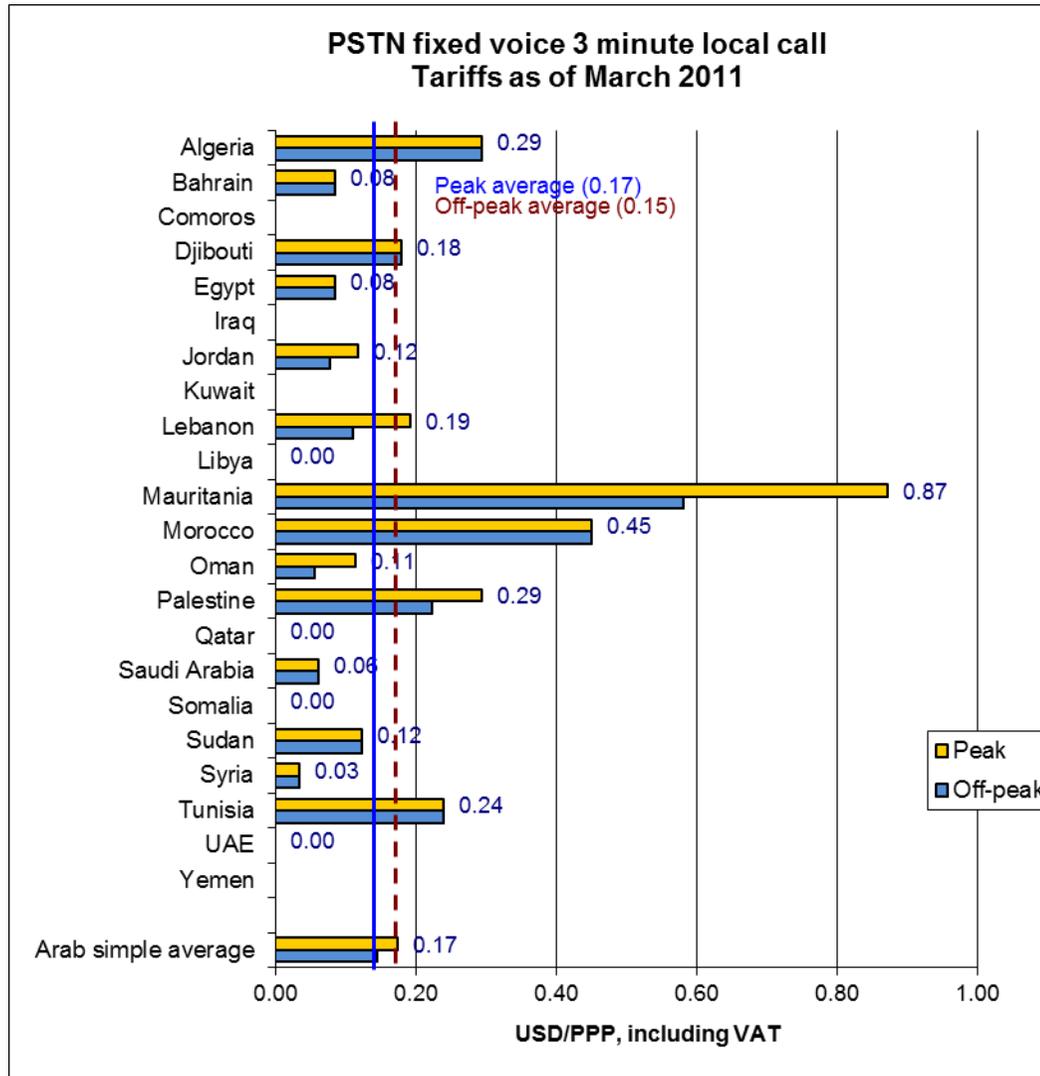
PSTN call cost comparison

Call cost comparison data issues

- The comparison of call cost is based on the actual cost of a 3 minute call.
- Costs are compared for local calls, national calls, F2M calls and calls to the USA
 - At peak and off-peak times
 - Off-peak meaning the lowest possible cost period
- These comparisons have a much simpler methodology than the basket comparisons shown elsewhere in this report, and will reflect the costs for specific call types.
- The results are presented with countries in alphabetical order as a ranking of these results is not necessarily useful.
 - Services with for example free calls (zero cost per call) may still have a higher total cost to the end user



Local call comparison

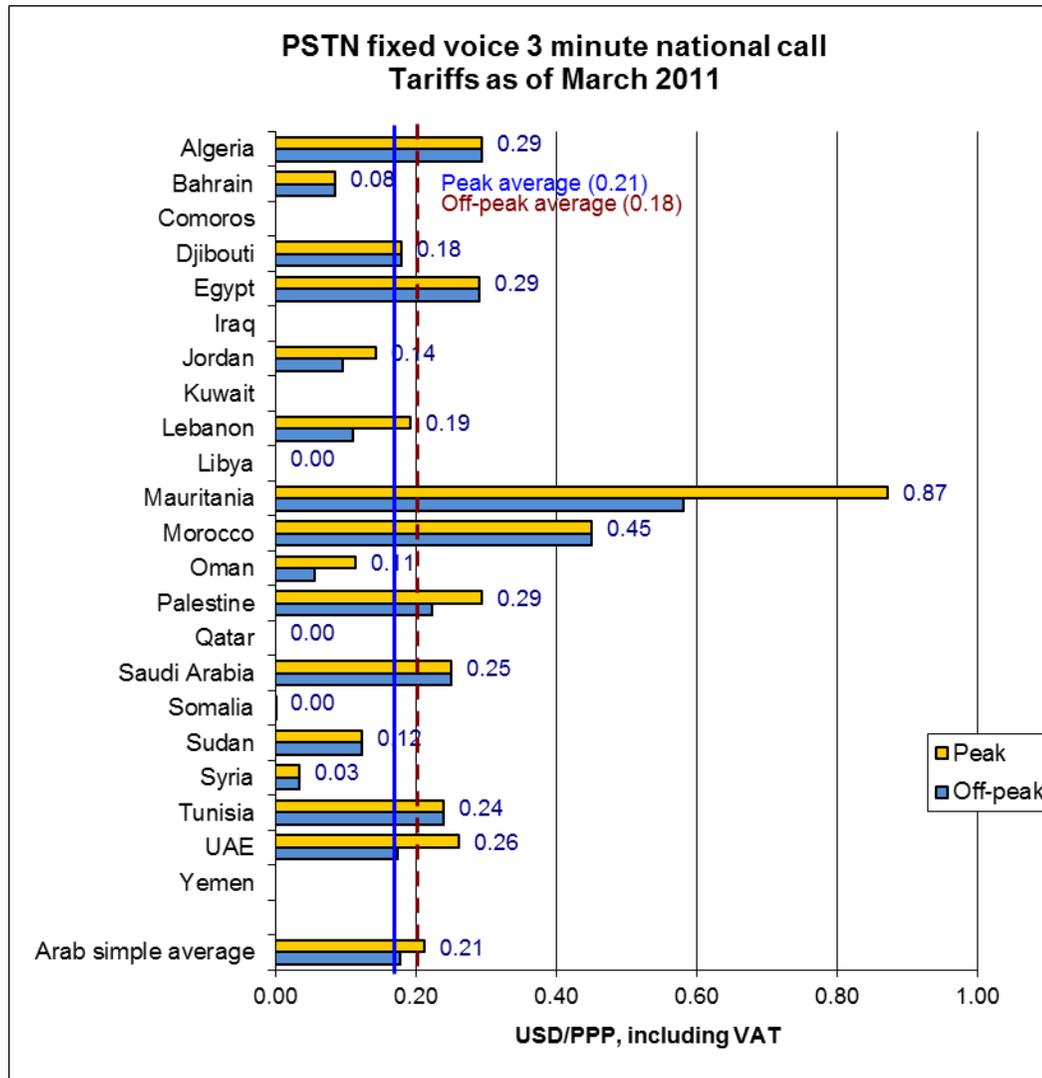


Many of the countries continue to have the same prices for peak and off peak calls.

Entries with call cost of 0.00 have free calling included in the monthly rental.



National call comparison

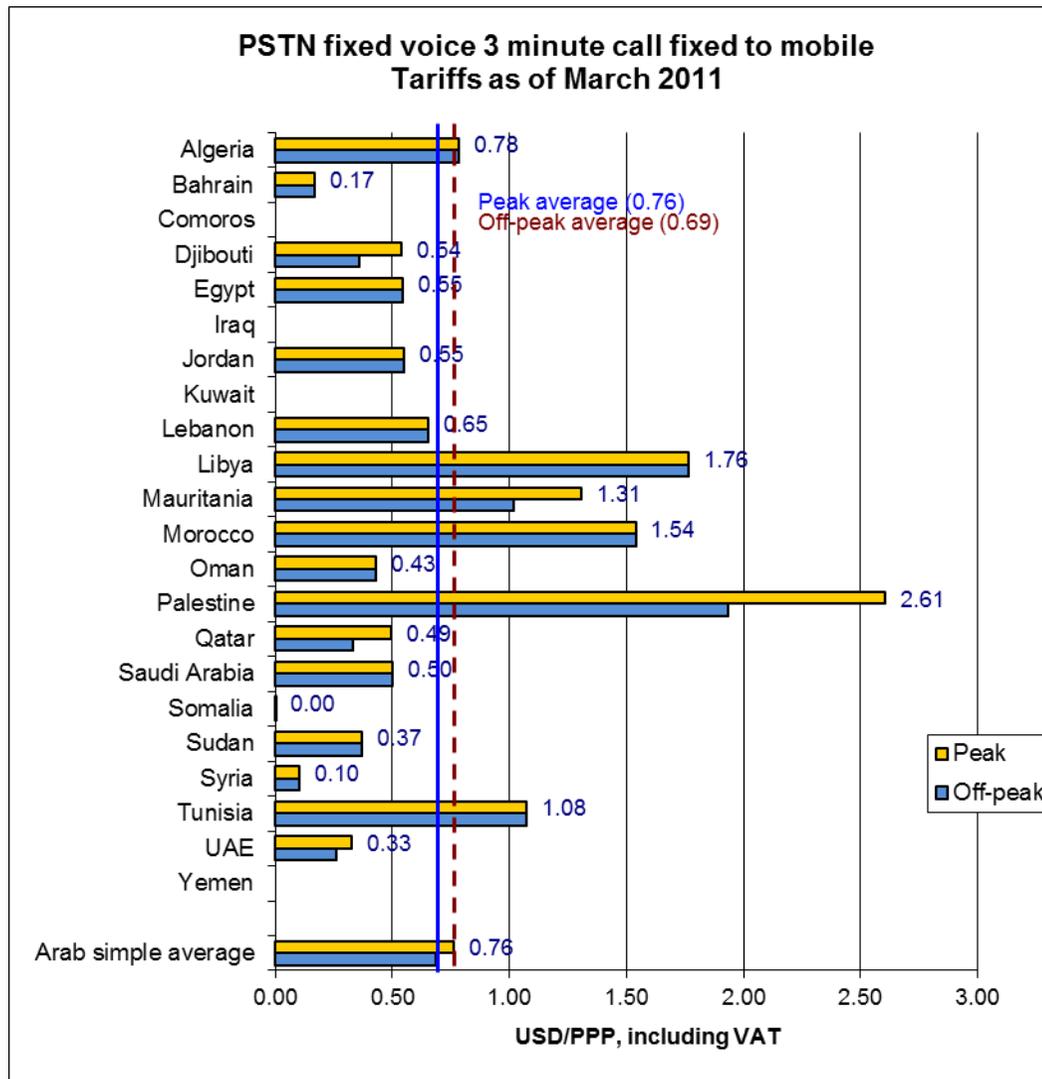


Similar to local calls, many of the countries continue to have the same prices for peak and off peak calls.

Entries with call cost of 0.00 have free calling included in the monthly rental.



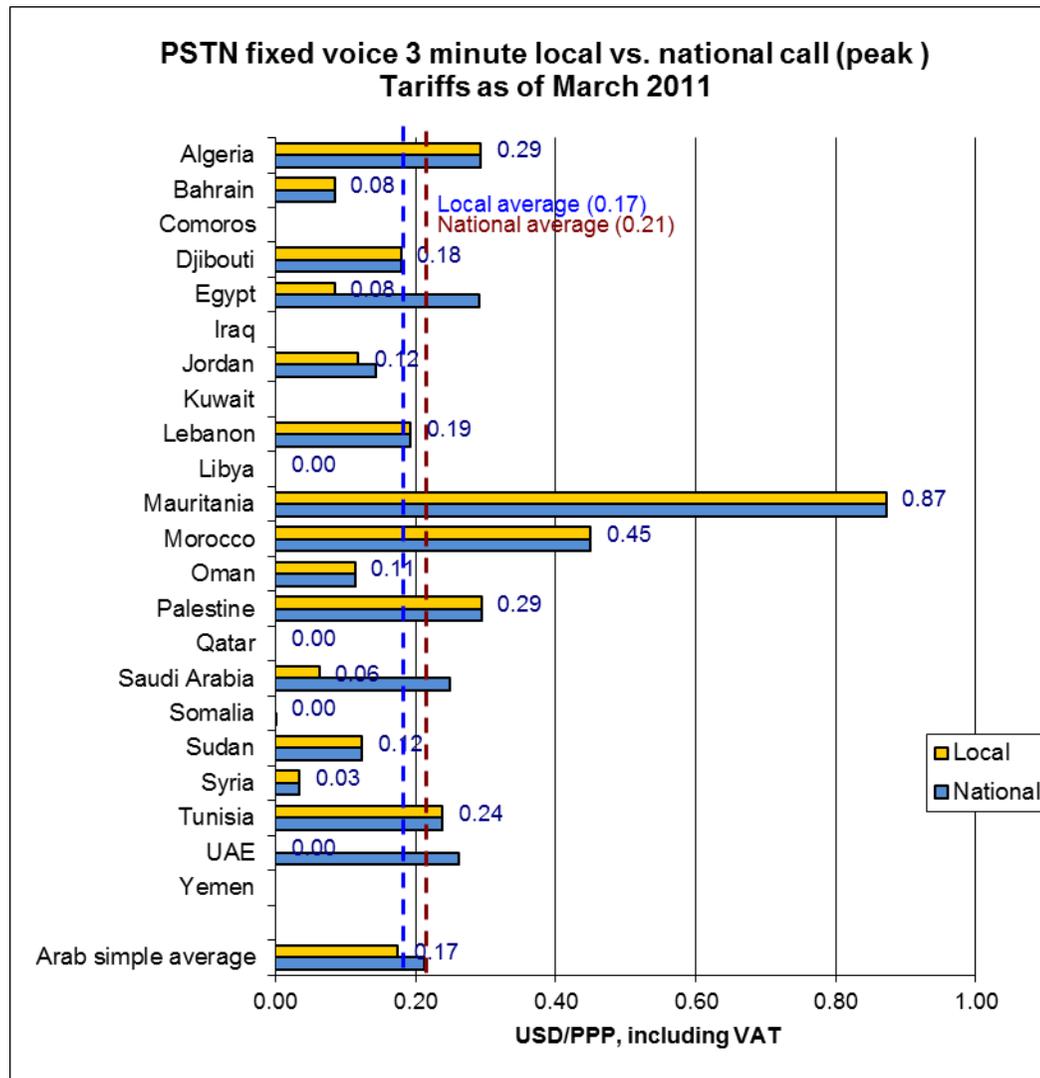
Fixed to mobile (F2M) call comparison



Entries with call cost of 0.00 have free calling included in the monthly rental.



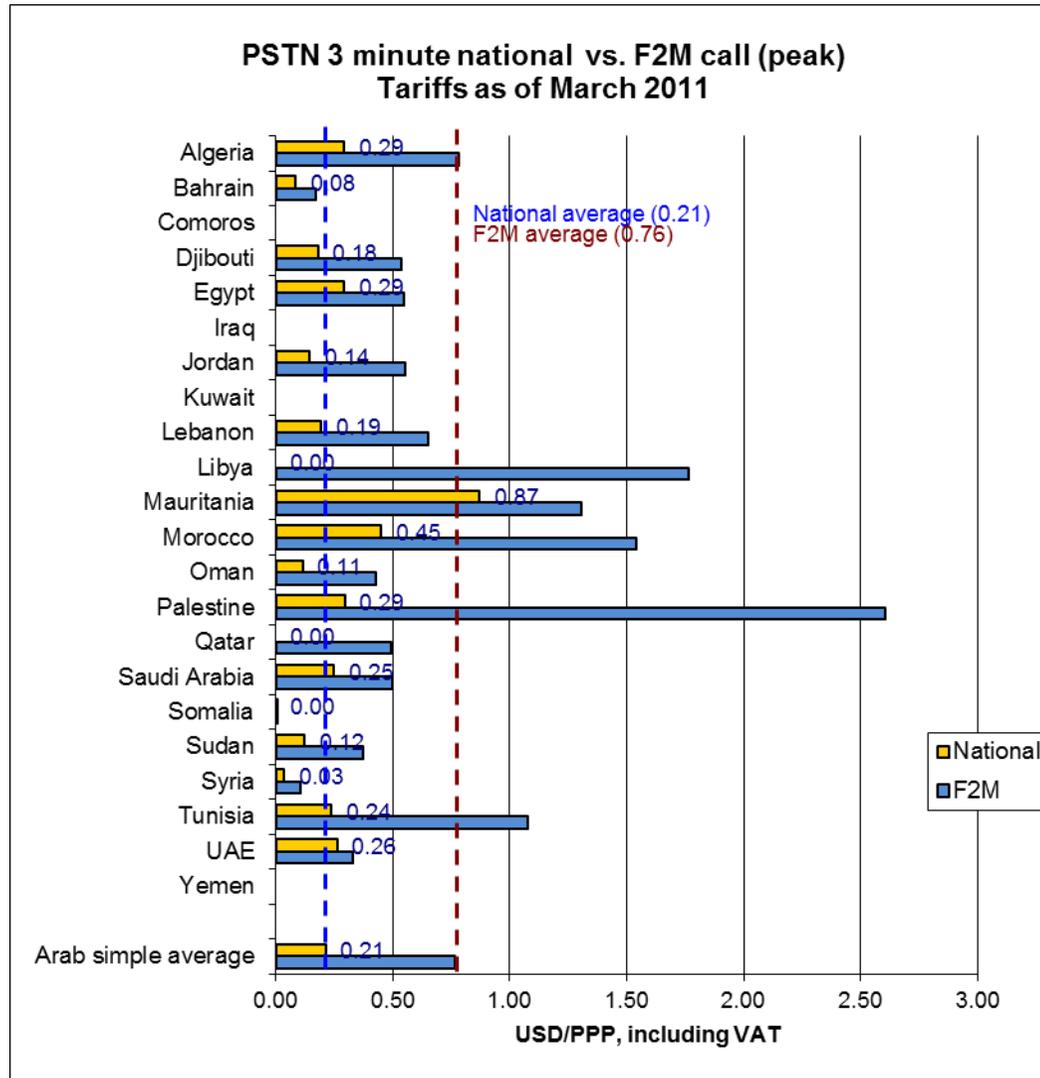
Local vs. national PSTN



In many countries, there is no difference between local and national call costs.



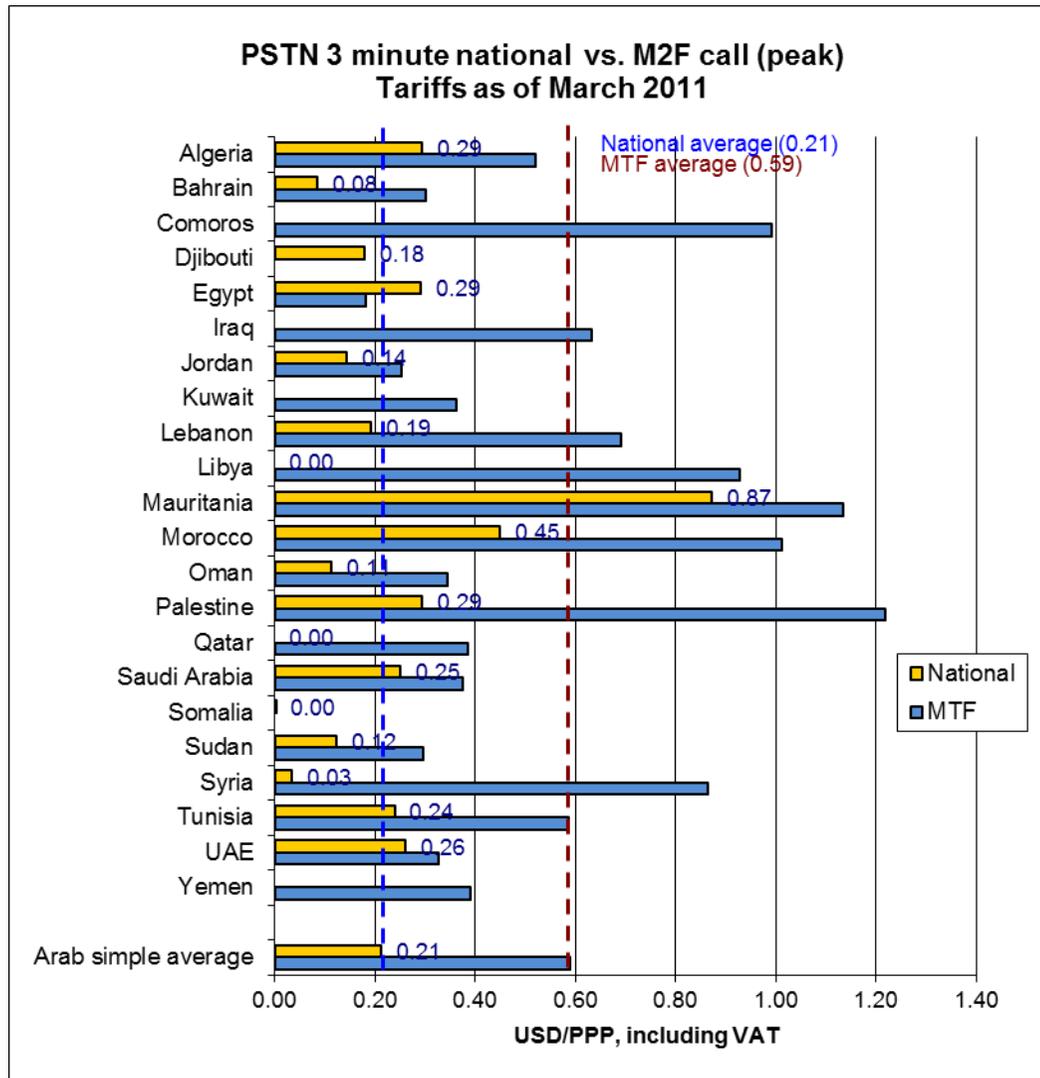
National PSTN vs. fixed-to-mobile (F2M)



The ratio of national to fixed to mobile charges varies dramatically across the Arab countries, with fixed to mobile calls being on average 3.6 times more expensive than national calls.



National PSTN vs. mobile-to-fixed (M2F)

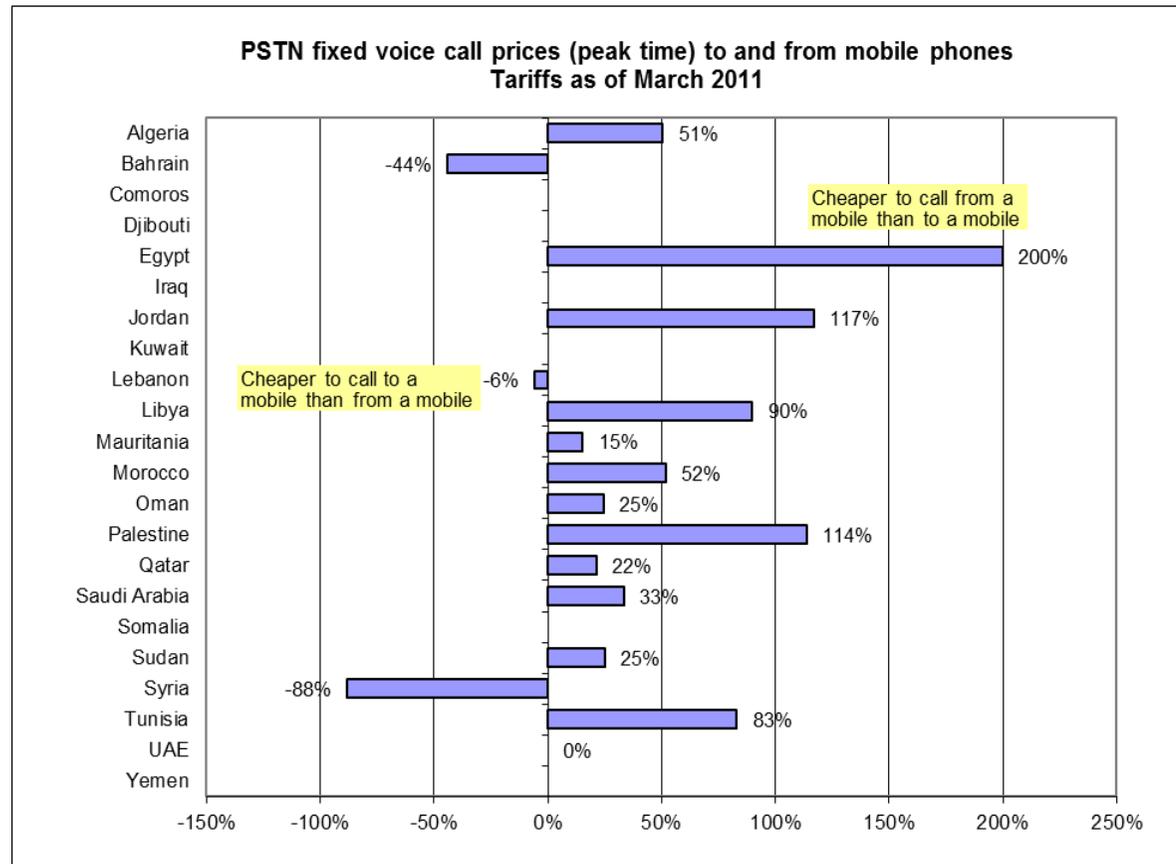


The ratio of national to mobile-to-fixed varies dramatically across the Arab countries, with fixed to mobile calls being on average 2.8 times more expensive than national calls. Mobile to fixed calls are generally cheaper than fixed-to-mobile calls.



Making and receiving calls to/from mobile

The relationship between prices of calls to a mobile phone and from a mobile phone varies a lot between countries, but calling from mobile to fixed is generally cheaper than calling from fixed to mobile.

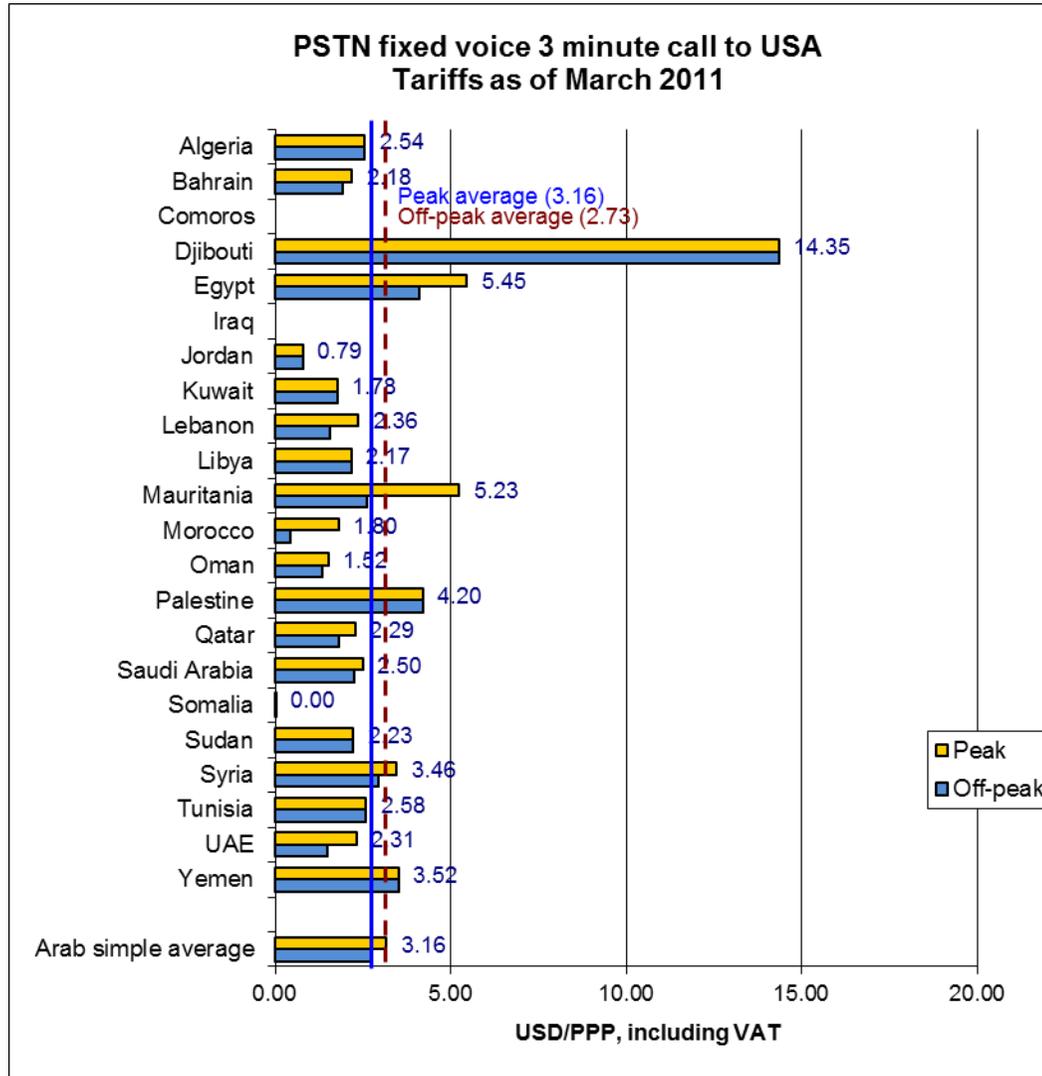


2011 To/From mobile		
	Peak	Off-peak
Algeria	51%	51%
Bahrain	-44%	-39%
Comoros		
Djibouti		
Egypt	200%	187%
Iraq		
Jordan	117%	117%
Kuwait		
Lebanon	-6%	-6%
Libya	90%	90%
Mauritania	15%	-10%
Morocco	52%	52%
Oman	25%	25%
Palestine	114%	59%
Qatar	22%	-13%
Saudi Arabia	33%	33%
Somalia		
Sudan	25%	25%
Syria	-88%	-85%
Tunisia	83%	104%
UAE	0%	-11%
Yemen		
Average	-21%	-26%

+ means F2M higher than M2F
- means F2M lower than M2F



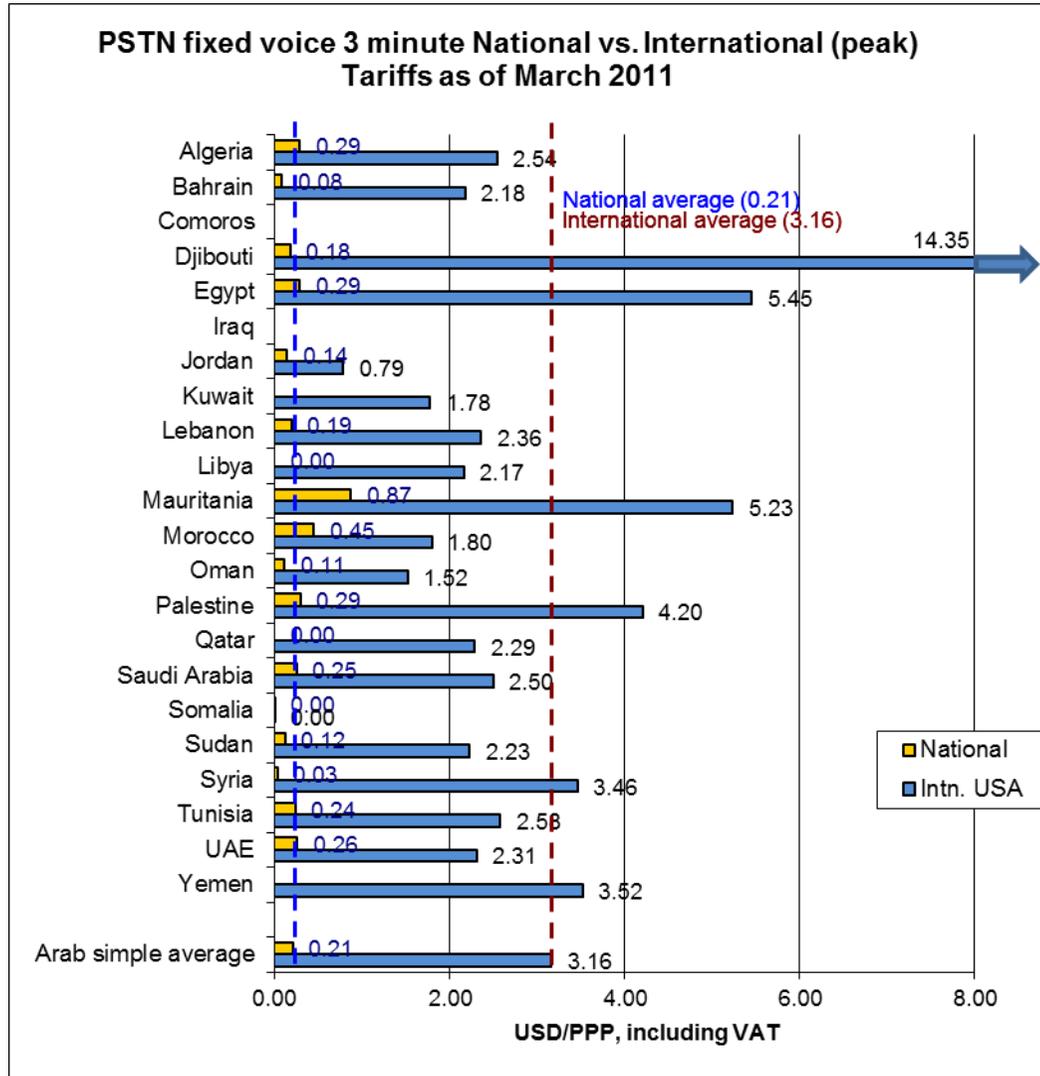
International call comparison (call to USA)



In most countries, there is no or little difference between peak and off-peak calling internationally (to the USA)



National vs. international to USA



International calls (to the USA) are significantly more expensive than national calls in the Arab countries – on average 15 times more expensive



Call costs 2010 - 2011

- There have been some changes in call charges 2010 – 2011
 - An increase in local call charges in Mauritania (peak only), Palestine (peak and off-peak) and Tunisia (peak and off-peak)
 - An increase in national call charges in Mauritania, Palestine, and a decrease in Tunisia and UAE.
 - An increase in international call charges in Egypt, Mauritania and Tunisia, and a decrease in Morocco, Syria and Yemen.



Observations from the call cost comparison

- Prices of calls vary considerably between countries
- Around half of the countries do not offer off-peak rates for national calls or for calls to the USA
- In some countries the local and/or national calls are “free”, i.e. included in the monthly rental.
 - Libya, Qatar, Somalia and UAE
- In some countries there are several tariff options available, with different call charges and fixed charges. This analysis is based on the so called “basic” packages.
- Ratios of national to international call prices remain very high, and indicate that rebalancing of call charges has not yet taken place in many countries of the region



Summary of main findings from the benchmarking study

- Fixed voice telephony
 - Prices are on average higher in Arab countries than in OECD countries, except for very low usage
 - There is a widespread of price levels between the Arab countries
 - Although there has been some rebalancing, there is still a lot of room for more, with Arab countries generally displaying low fixed and high usage costs
 - International call charges in particular, are significantly higher than in OECD countries
 - Prices have gone down over the last year in some countries, and overall price reductions in the past year are broadly in line with average OECD reductions
 - The lack of rebalancing will make it difficult for the incumbent operators to perform in a competitive market
- Mobile telephony
 - Price levels in most Arab countries compare well with OECD countries, especially for low and medium usage
 - Prices are relatively uniform throughout the region, although costs in some countries are very high, most notably in Comoros and Palestine
 - Many countries have reduced prices over the last year and introduced more calling plans, although the average number of plans per operator is still well below the OECD average
- Leased Lines
 - Prices for high speed circuits are generally higher than in OECD countries
 - There is a wide spread of prices between the Arab countries
- Broadband
 - Price levels are generally higher, sometimes significantly so, in Arab countries than in OECD countries
 - The speed range offered is lower in Arab countries, and prices increase rapidly with speed.
 - The higher charges will inhibit broadband penetration
 - Higher speeds are available in more countries than a year ago, and lower speeds such as 128 kb/s is gradually being phased out.
- Mobile broadband
 - Mobile broadband services are not widely available across the Arab countries, particularly higher speed services (> 8Mb/s)
 - Mid speed services, 2-8 Mb/s, are more prevalent in the Arab countries, but are more expensive than the T-Wireless average which has been used for comparison.
 - Business services are generally more expensive than residential services for mid-range speeds, but are more on par for higher speeds
- Generally prices in Arab countries have gone down, but since prices have gone down in other parts of the world as well the gap between prices in Arab countries and prices in OECD / European countries remains.

Appendix

Fixed voice (PSTN) baskets, 2006 version

- Five different basket definitions:
 - Low usage, medium usage and high usage for residential users
 - SoHo usage (single user) and SME usage (30 users) for business
- The baskets define the volumes and the structure of usage
 - Volume and distribution of calls to different destinations
 - Distribution and duration of calls at different times of day

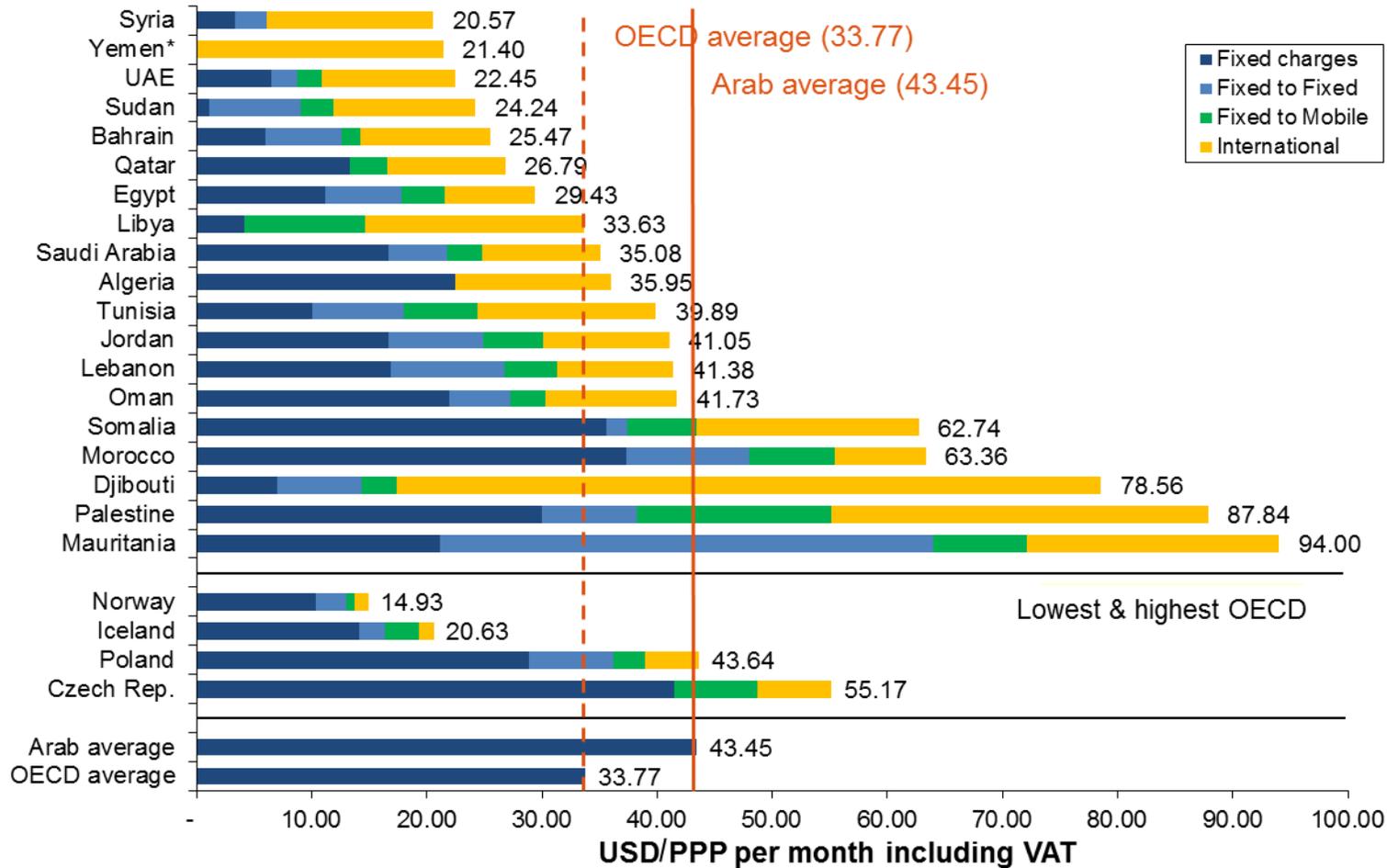
	Volumes	Call proportions			Call durations (minutes)		
	Total calls per month	Fixed line	Mobile	International	Fixed	Mobile	International
Residential Low	50	76.0%	19.0%	5.0%	3.7 - 7	1.8 - 2.1	5.5 - 7.2
Residential Medium	100	75.0%	23.0%	2.0%	3.7 - 7	1.8 - 2.1	5.5 - 7.2
Residential High	200	65.0%	31.0%	4.0%	3.7 - 7	1.8 - 2.1	5.5 - 7.2
Business Small	150	67.0%	29.0%	4.0%	1.9 - 3.1	1.6 - 1.7	2.9 - 3.9
Business SME	233	72.0%	20.0%	8.0%	1.9 - 3.1	1.6 - 1.7	2.9 - 3.9

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



Fixed voice OECD 2006 residential low usage basket results

PSTN fixed voice OECD 2006 low usage basket
Tariffs as of March 2011



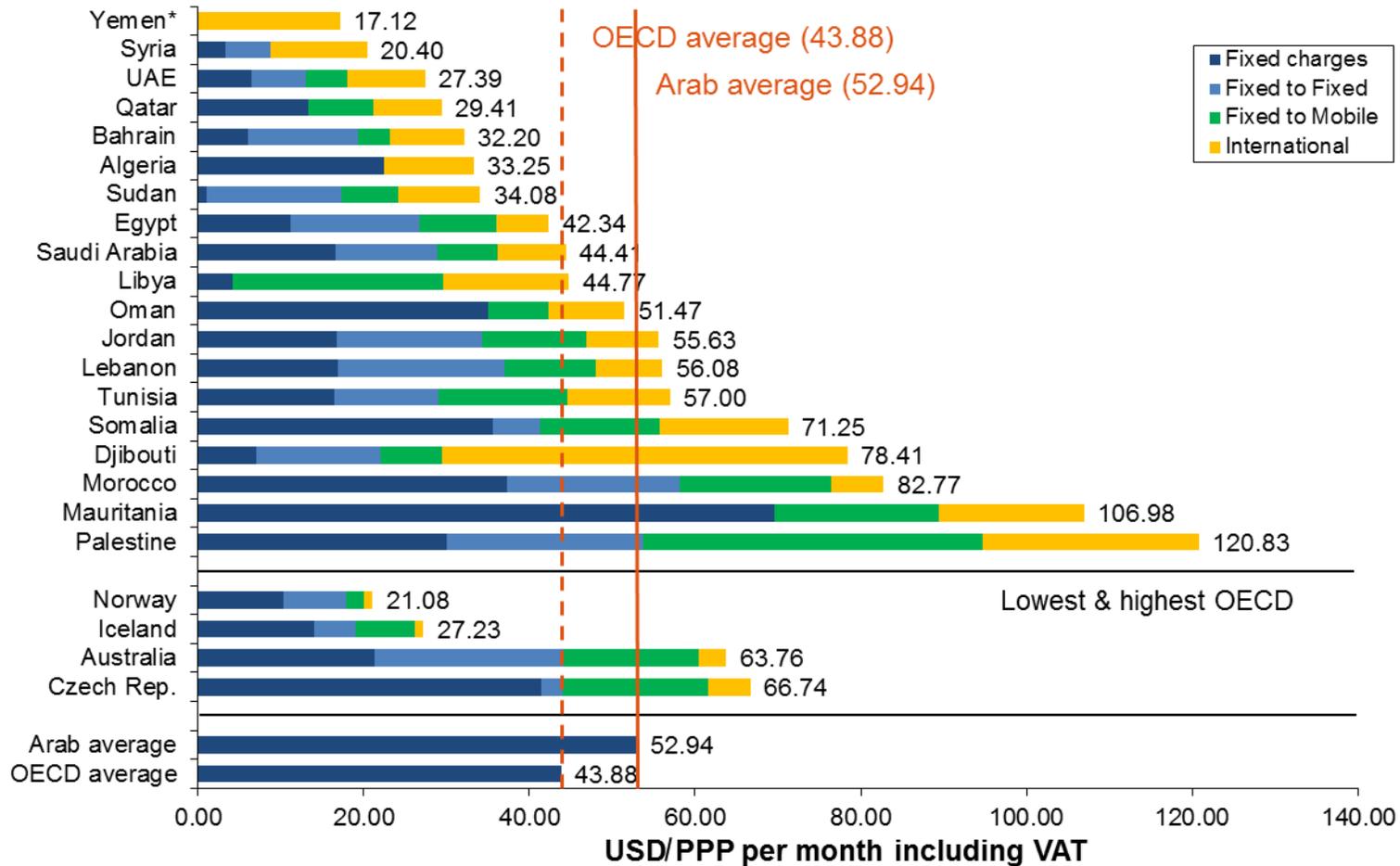
*No national data available for Yemen

Most Arab countries have a low fixed cost, and "average to high" usage cost.



Fixed voice OECD 2006 residential medium usage basket results

PSTN fixed voice OECD 2006 medium usage basket
Tariffs as of March 2011

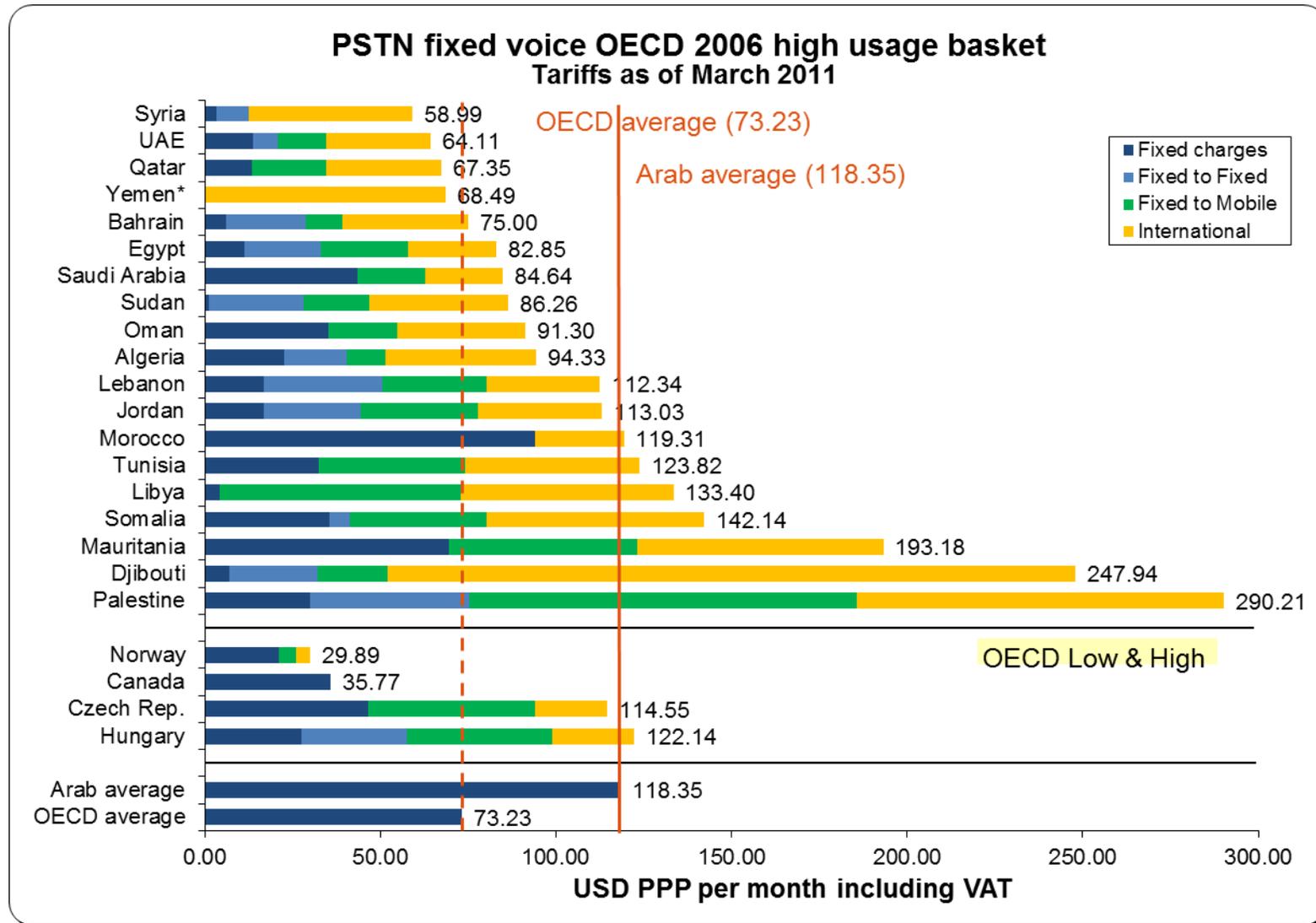


*No national data available for Yemen

Most Arab countries have a low fixed cost, and "average to high" usage cost.



Fixed voice OECD 2006 high usage basket results



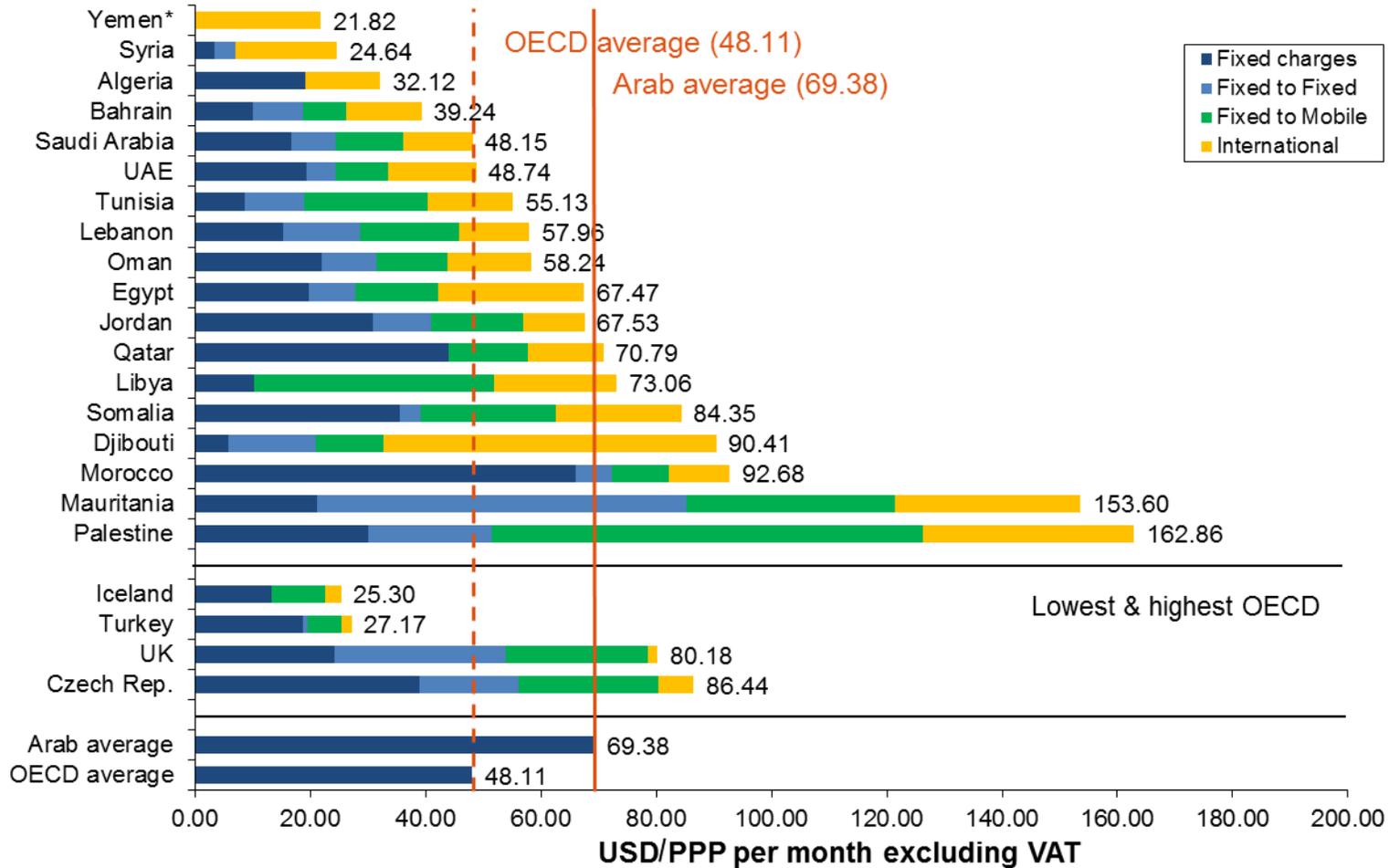
*No national data available for Yemen

Most Arab countries have a low fixed cost, and "average to high" usage cost.



Fixed voice OECD 2006 SOHO basket results

PSTN fixed voice OECD 2006 SOHO basket
Tariffs as of March 2011



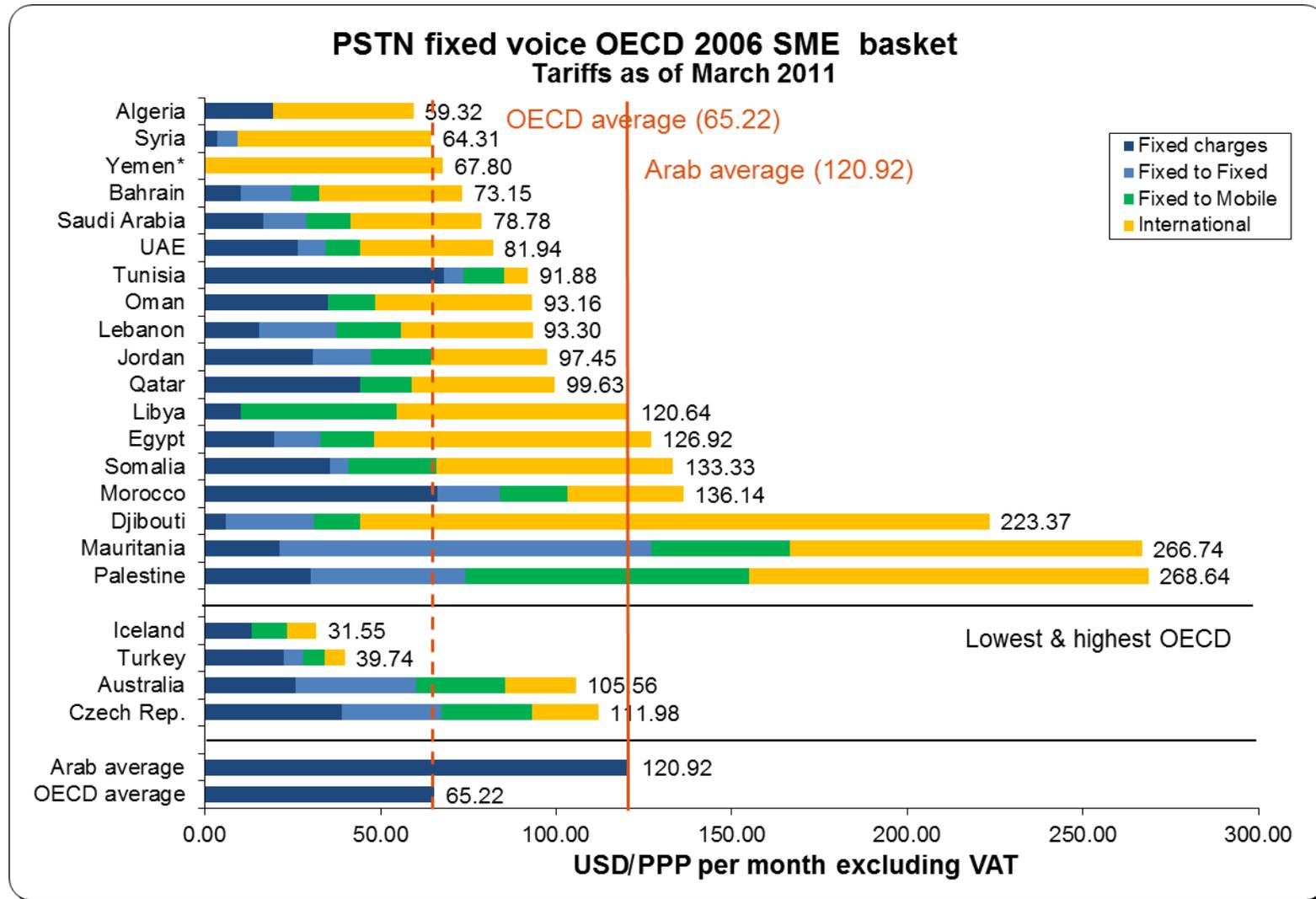
*No national data available for Yemen

The profile of the "Small Office / Home Office" basket is largely similar to the Medium Residential basket. The main difference is higher overall usage and more international calls.

The difference between the Arab and the OECD averages is smaller for business services than for residential services.



Fixed voice OECD 2006 SME basket results



*No national data available for Yemen

The SME basket covers 30 lines and 30 users. Usage per user is higher than with the SOHO basket.

All Arab countries apart from Algeria and Syria are above OECD average.



OECD mobile basket , 2006 version

- Three different basket definitions:
 - Low usage, medium usage and high usage
 - The low usage results will include both pre- and post-paid tariff packages
- The baskets define the volumes and the structure of usage
 - Volume and distribution of calls to different destinations
 - Distribution of calls at different times of day

Calls / messages per month	Voice	SMS	MMS
Low usage	30	33	0.67
Medium usage	65	50	0.67
High usage	140	55	1.00

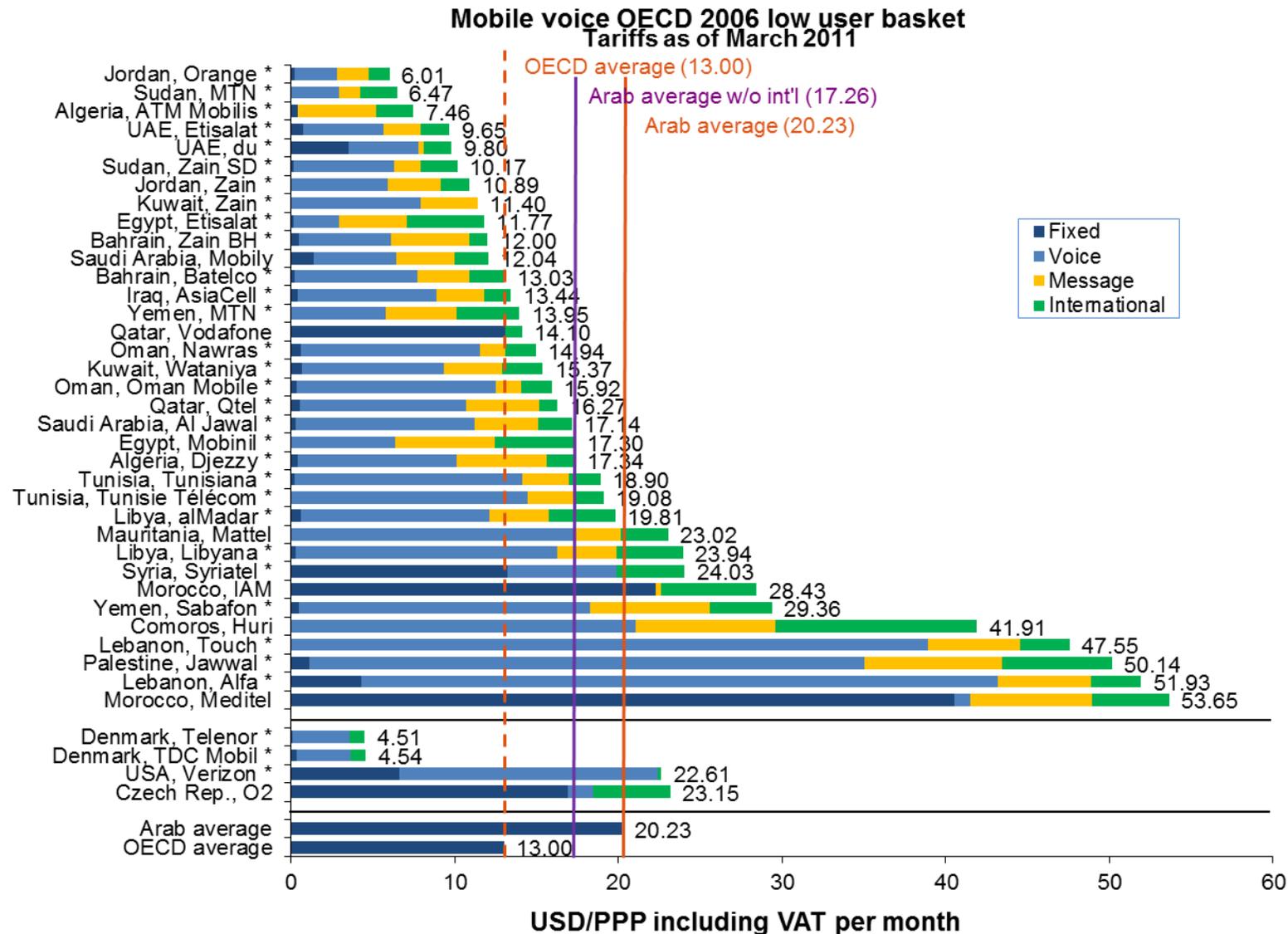
Destinations	Local	National	Mobile On-net	Mobile Off-net	Voice mail	SMS On-net	SMS Off-net
Low usage	15.00%	7.00%	48.00%	22.00%	8.00%	65.00%	35.00%
Medium usage	14.00%	7.00%	48.00%	24.00%	7.00%	65.00%	35.00%
High usage	13.00%	7.00%	47.00%	26.00%	7.00%	65.00%	35.00%

ToD	Peak	Off-peak	Weekend
Low usage	48.00%	25.00%	27.00%
Medium usage	50.00%	24.00%	26.00%
High usage	60.00%	19.00%	21.00%

- Call durations are in the range of 1.4 to 1.9 minutes per call
- Tariffs from the two dominant operators in each country
 - Several tariff packages are covered for each operator
- Tariff information covers:
 - Fixed charges for connection and rental
 - Calls to fixed network, on-net and off-net mobile, and international calls to other AREGNET countries plus a few others (see international basket on earlier page)
 - Charges for SMS, MMS and voicemail calls
- The results show the lowest cost option for each operator
- As the OECD basket does not include international calls, an average without international calls for the Arab baskets is also shown.



Low usage mobile basket results OECD 2006



For the Low usage basket both pre- and post-paid tariffs are included. The cheapest option is selected regardless of tariff type.

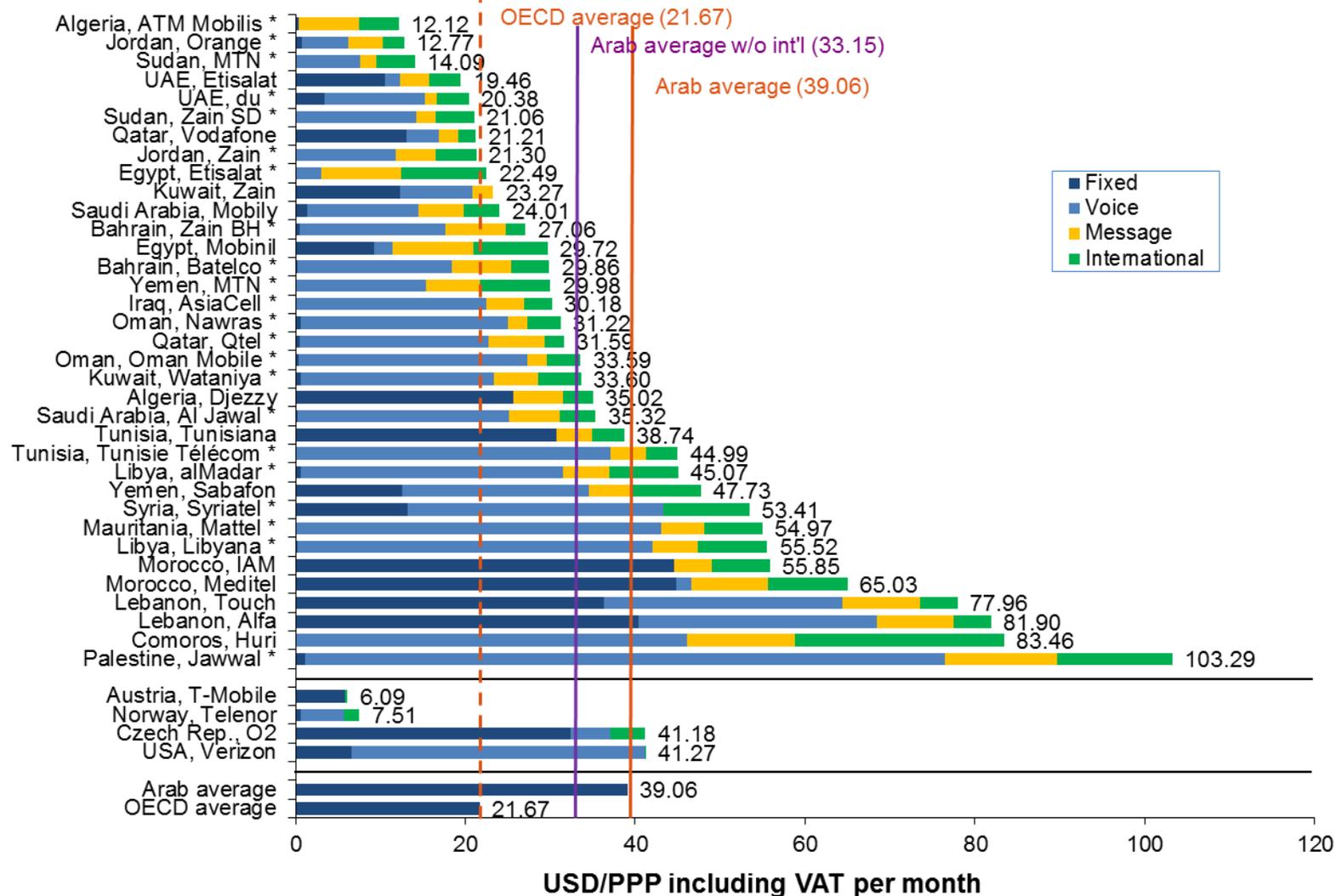
Most of the tariffs shown in this graph are pre-paid (marked with an *).



Medium usage mobile basket results

OECD 2006

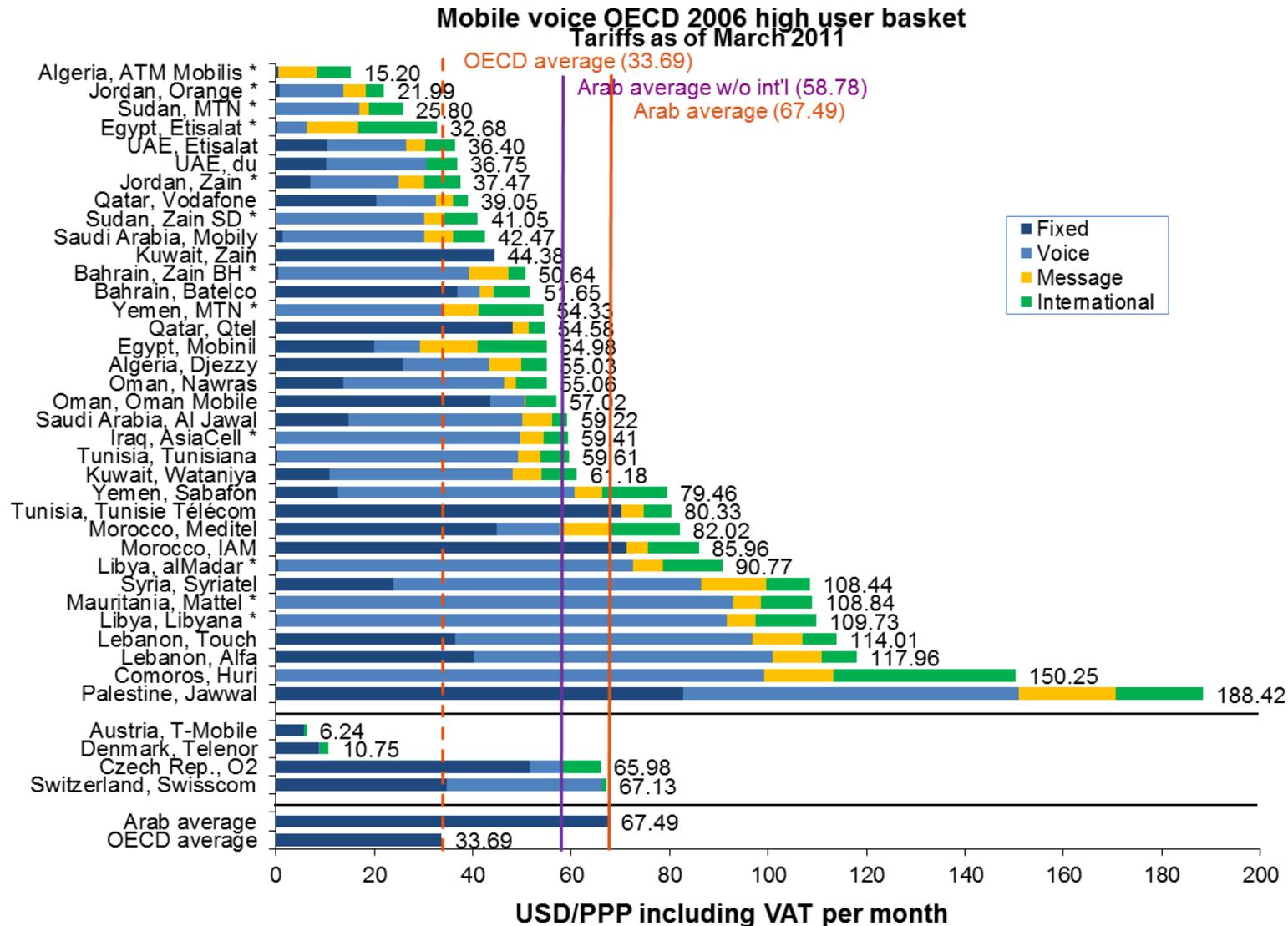
Mobile voice OECD 2006 medium user basket
Tariffs as of March 2011



Most of the tariffs shown in this graph are pre-paid (marked with an *).



High usage mobile basket results OECD 2006



* Denotes prepaid packages



Exchange rates and VAT

Exchange rates and VAT

Related to:	US\$	US\$ PPP	%	Currency
Algeria	0.013940	0.027880	17.0 %	DZD
Bahrain	2.662300	4.033788	0.0 %	BHD
Comoros	0.002827	0.004960	0.0 %	KMF
Djibouti	0.005738	0.011954	19.0 %	DJF
Egypt	0.169600	0.605714	10.0 %	EGP
Iraq	0.000850	0.002237	0.0 %	IQD
Jordan	1.416100	2.622407	16.0 %	JOD
Kuwait	3.599700	4.931096	0.0 %	KWD
Lebanon	0.000668	0.001193	10.0 %	LBP
Libya	0.825500	2.063750	0.0 %	LYD
Mauritania	0.003584	0.009686	0.0 %	MRO
Morocco	0.123800	0.225091	20.0 %	MAD
Oman	2.604400	4.340667	0.0 %	OMR
Palestine	0.280300	1.401500	0.0 %	ILS
Qatar	0.274700	0.366267	0.0 %	QAR
Saudi Arabia	0.266600	0.416563	0.0 %	SAR
Somalia	0.000642	0.002140	0.0 %	SOS
Sudan	0.363500	0.826136	10.0 %	SDG
Syria	0.021920	0.057684	0.0 %	SYP
Tunisia	0.717000	1.593333	18.0 %	TND
UAE	0.272300	0.363067	0.0 %	AED
Yemen	0.004693	0.013036	10.0 %	YER
UK	1.618000	1.371186	17.5 %	GBP
USA	1.000000	1.000000	10.0 %	USD
France	1.389900	1.208609	19.6 %	EUR

Prices for services in Iraq are given in US\$

Exchange rates taken from the Oanda web service on the 10 March 2011
 PPPs are based on OECD CPLs for June 2009 (latest available).

Purchasing Power Parities (PPP)

- PPPs are used to incorporate not only the financial differences between exchange rates, but also the differences in the state of the economies as seen through the purchasing power of the residents 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 OECD and published in June 2009.
- 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.

Acronyms used in the context of this report

- OECD: Organisation of Economic Co-operation and Development
- OECD countries: Australia, Austria, Belgium, Canada, Czech Rep., Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Rep., 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. This study uses data from the OECD (CPLs 2009 – latest available).
- 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.