

Final report: December 2019

Bahrain Telecom Pricing International Benchmarking



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REPORT OVERVIEW

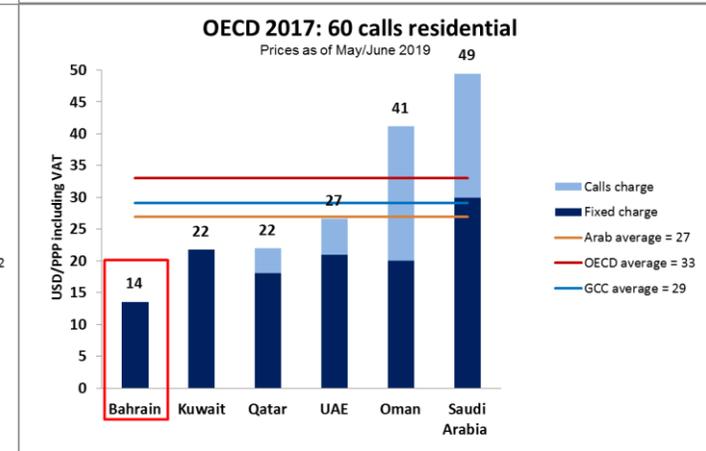
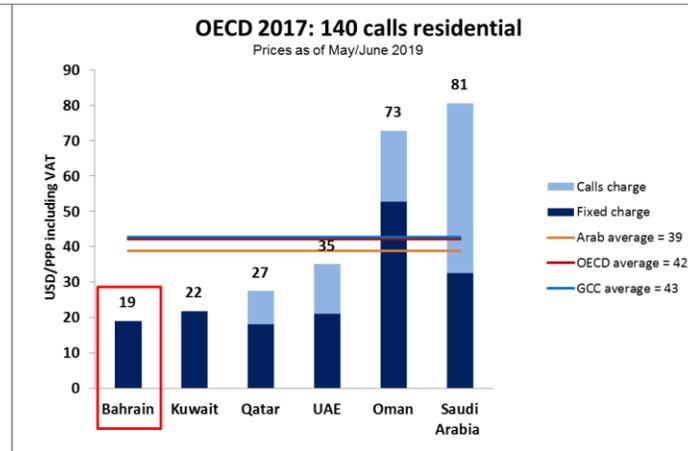
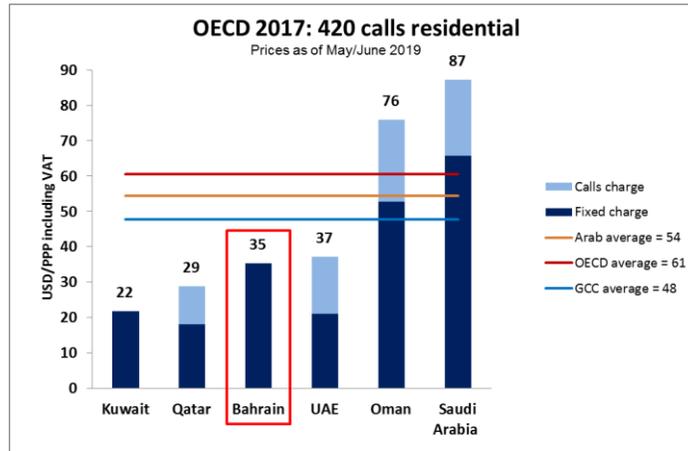
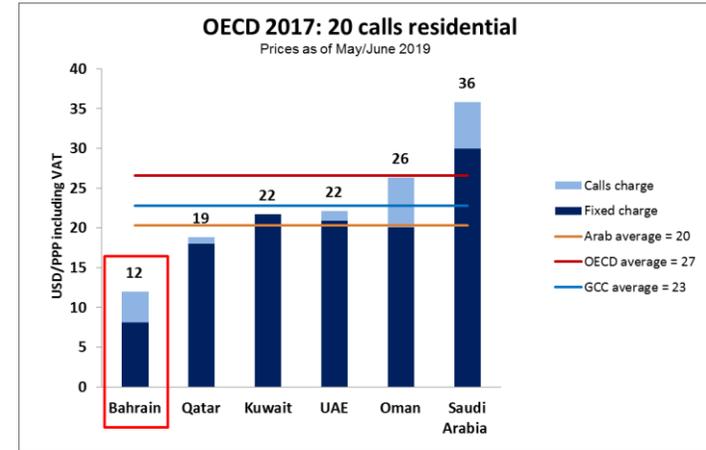
- This report focusses specifically on Bahrain retail prices for telecommunications services in compared to GCC countries, Arab average and OECD average.
- The services covered in this report are the same as the services covered in the main AREGNET report, namely:
 - Fixed voice (PSTN)
 - Mobile telephony
 - Fixed Broadband
 - Mobile Broadband
- In addition, aggregate analyses have been included, to illustrate the likely total costs faced by consumers and businesses separately who subscribe to a number of communications services. In this analysis, 3 types of user have been defined for consumers; with low usage, medium usage and high usage, and 2 types of user for businesses; medium and high usage.
- All the results contained in the report are derived directly from data from the main AREGNET study, which is based on OECD methodologies, and which uses data gathered in May/June 2019.
- References to both GCC and Arab averages are included, for comparison. Where relevant the OECD average is also shown
- The results are shown in US\$/PPP, based on exchange rates taken from oanda.com as of May 2019. The PPP conversion uses World Bank "Comparative Price Levels" from 2018.
- An overview of the study methodology, as well as a description of the baskets considered within each service can be found in a separate document*

* AREGNET Price Benchmarking Methodology 2019

Thursday, January 23, 2020

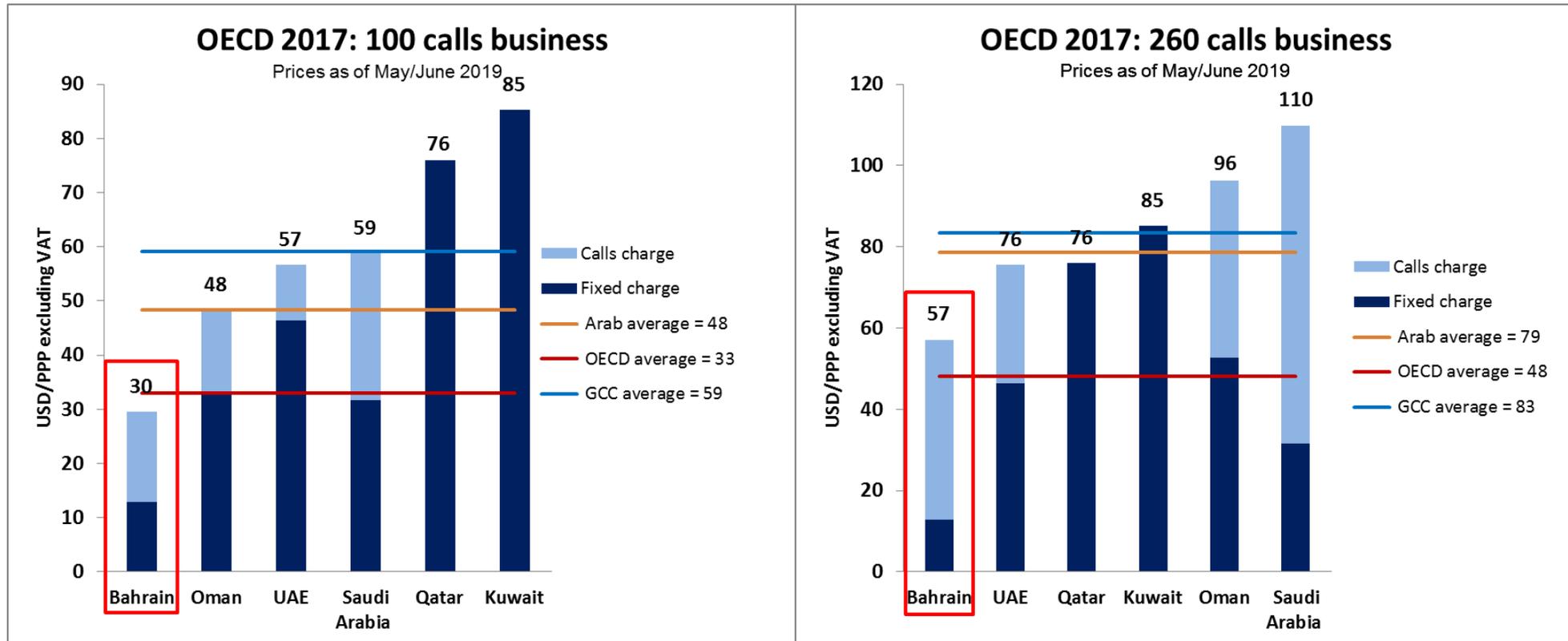
FIXED VOICE RESIDENTIAL BASKETS

- Bahrain has the lowest fixed charge for residential telephone lines for the lowest two baskets, and has the lowest overall cost for the three lowest baskets. As usage increases, it falls down the ranking, but still compares favourably.
- Bahrain is below the OECD average for all residential baskets. Similarly, it is lower than both the GCC and Arab averages at all usage levels.
- The Batelco tariff with low-cost bolt on minutes results in a very competitive offer across all baskets. Many of the other GCC countries include lower or “free” fixed line calls.



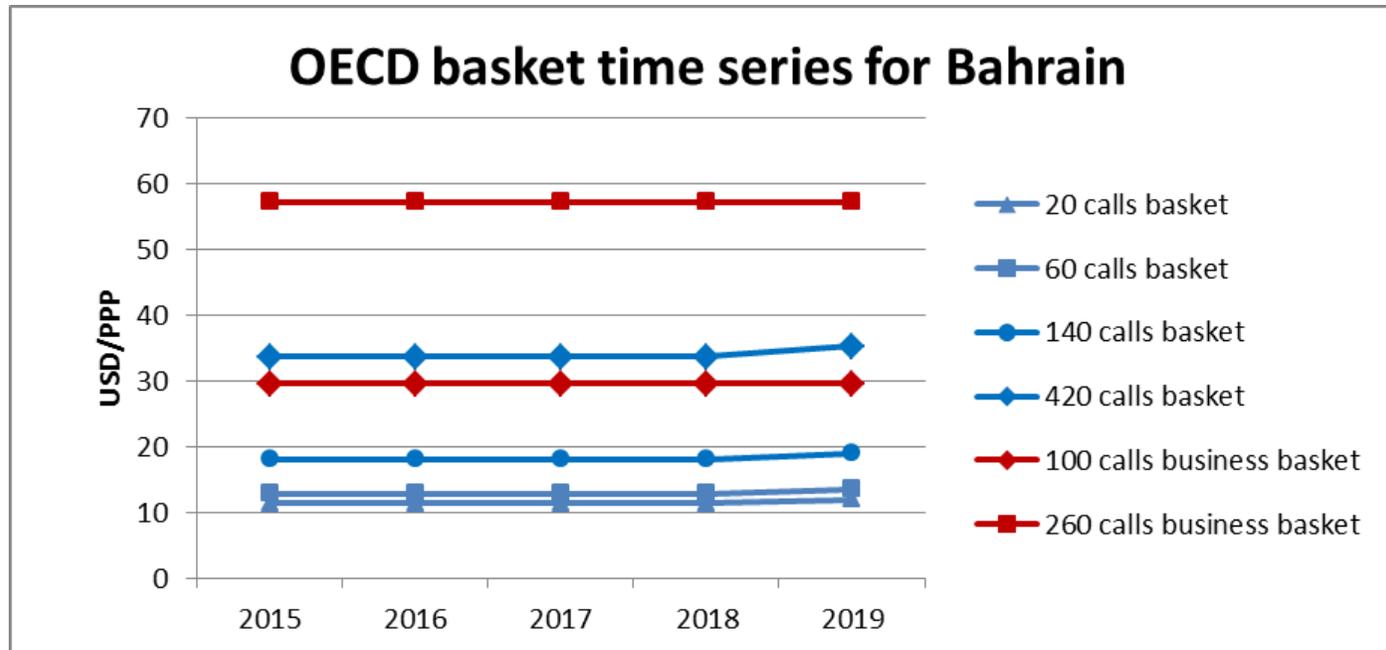
FIXED VOICE BUSINESS BASKETS

- Bahrain has the lowest fixed charge for business telephone lines, but has relatively high calling charges (especially for domestic fixed-to-fixed calls). In spite of this, Bahrain is performing well for both the low usage (100 calls) and high usage (260 calls) basket, with the lowest overall cost.
- Usage charges will escalate much faster with usage in Bahrain than in the other countries, meaning that for usage above approx. 500 calls Bahrain will be more expensive than some of the other countries.



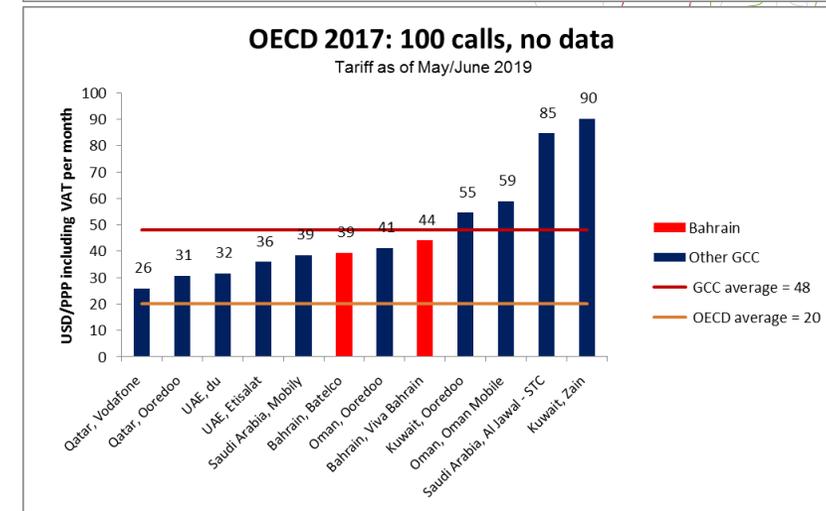
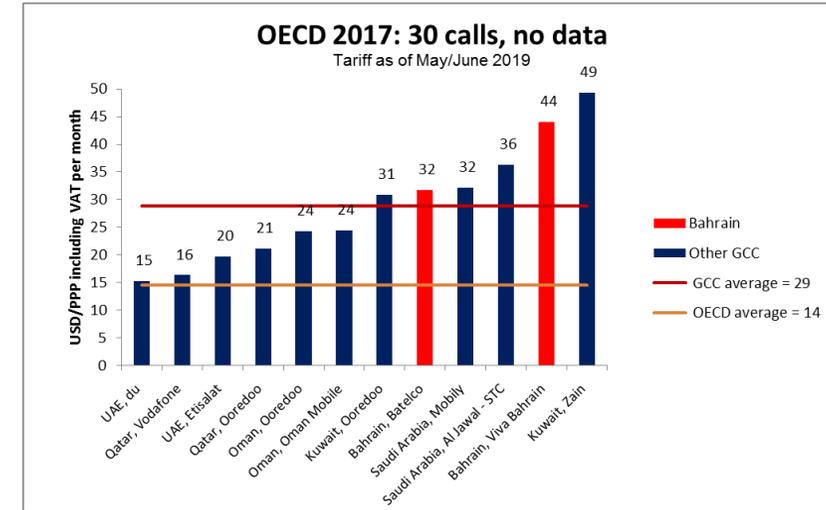
FIXED VOICE BASKETS TIME SERIES FOR BAHRAIN

- Fixed voice pricing in Bahrain has been broadly static since 2015 for most users. This is a typical trend with fixed voice in many countries. The inclusion of 5% VAT for 2019 resulted in a corresponding increase for residential users.
- Prices have remained competitive during this time, compared to other GCC countries.



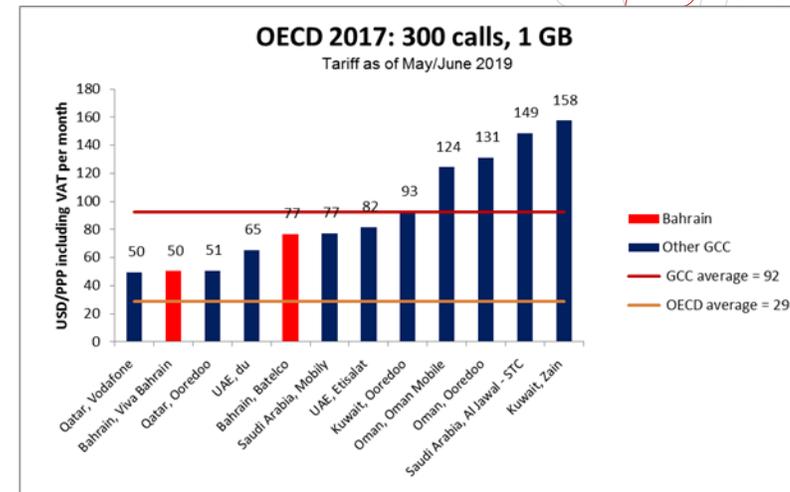
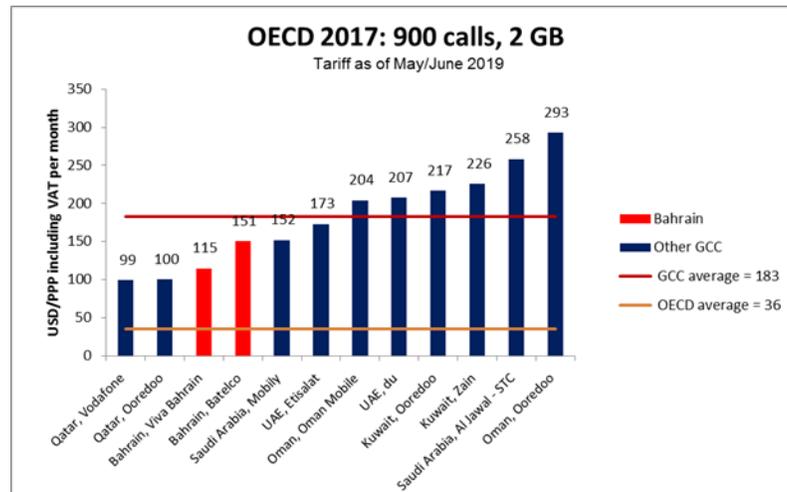
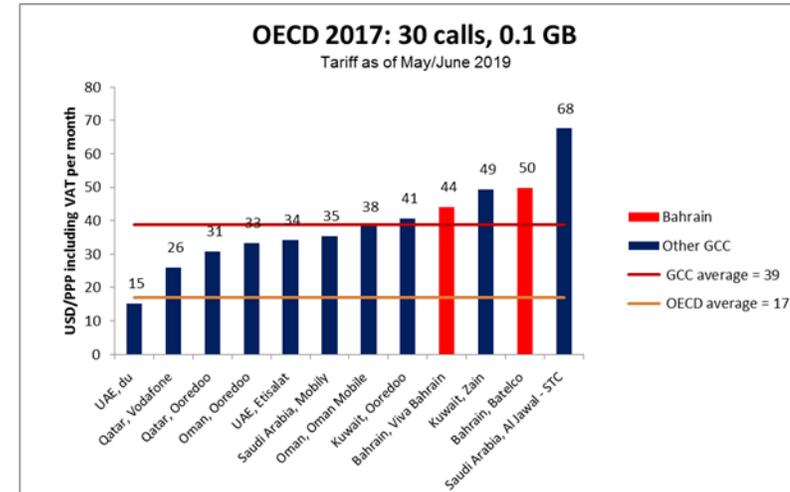
MOBILE BASKETS WITHOUT DATA

- Bahraini operators compare less favourably to the GCC average for lower usage baskets with no data, and for the very low usage basket (30 calls) are almost the most expensive of the GCC providers. As usage increases, however, the position of Bahrain improves, due to the prevalence of tariffs with higher upfront rental with high call allowances/free calls. It is worth noting that all mobile packages for the Bahraini providers include data. The minimum allowance is 1GB, and many packages are significantly higher than this. This makes the cost of baskets with no or low data requirements less favourable for Bahrain.
- Bahrain is significantly above the OECD average, for both low and high usage tariffs. A small number of GCC countries are closer, at low usage, but as usage increases, the position for these countries relative to the OECD average worsens.



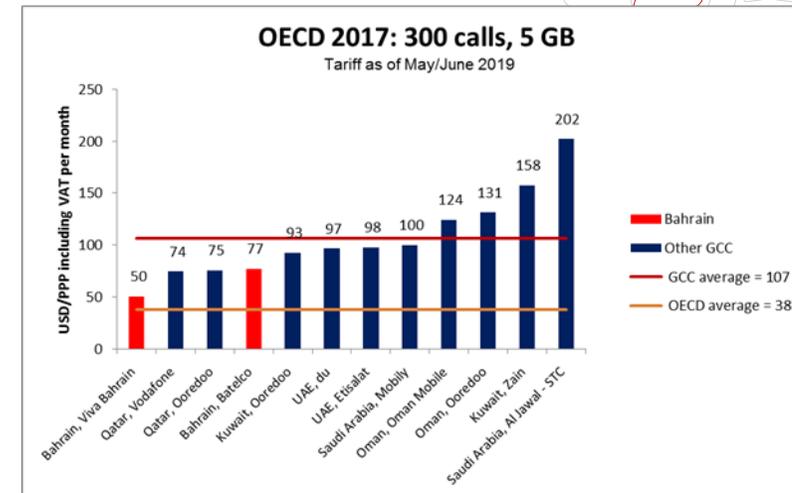
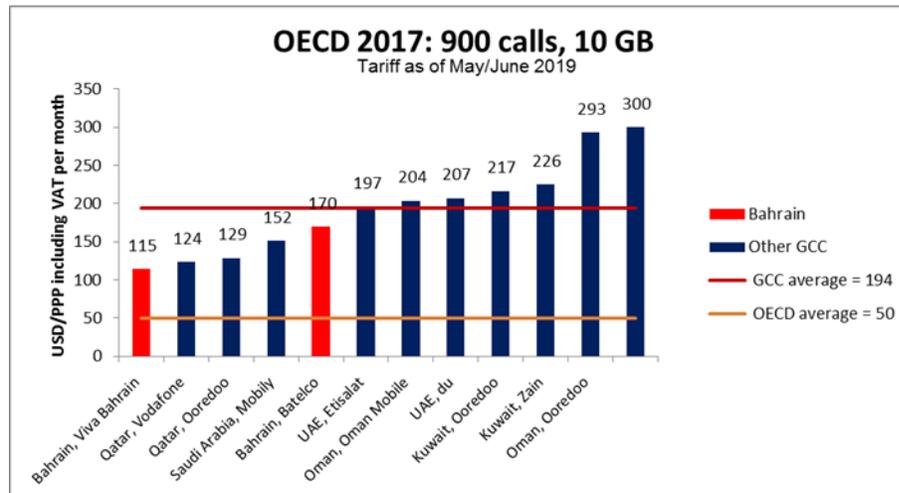
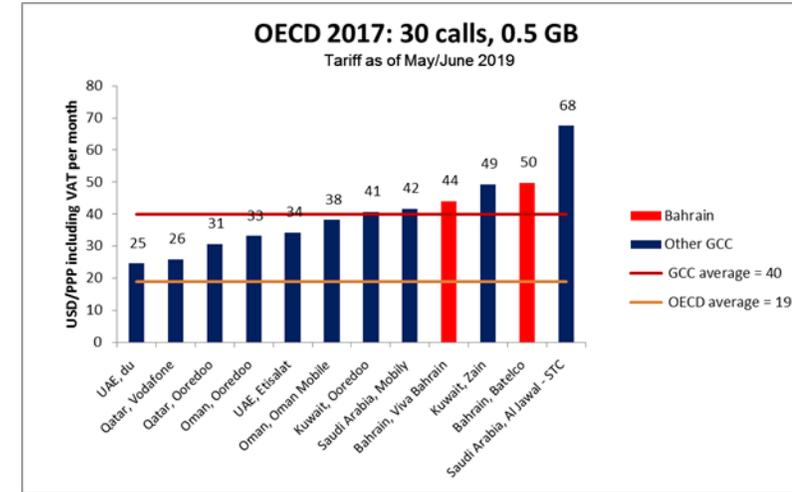
MOBILE BASKETS WITH LOW DATA

- For very low data (and call) usage, Bahraini operators are typically somewhat less competitive across the GCC, with both providers sitting towards the upper end in terms of ranking. Costs are on par with the GCC average but much higher than the OECD average.
- As data usage increases, prices in Bahrain become much more competitive. For the 300 calls+1 GB basket, the Bahraini operators feature as the second and fifth cheapest across the GCC countries. For the 900 calls + 2GB basket, the Bahraini operators rank in 3rd and 4th place respectively.
- For almost all usage scenarios, the OECD is consistently much lower than GCC operator costs.



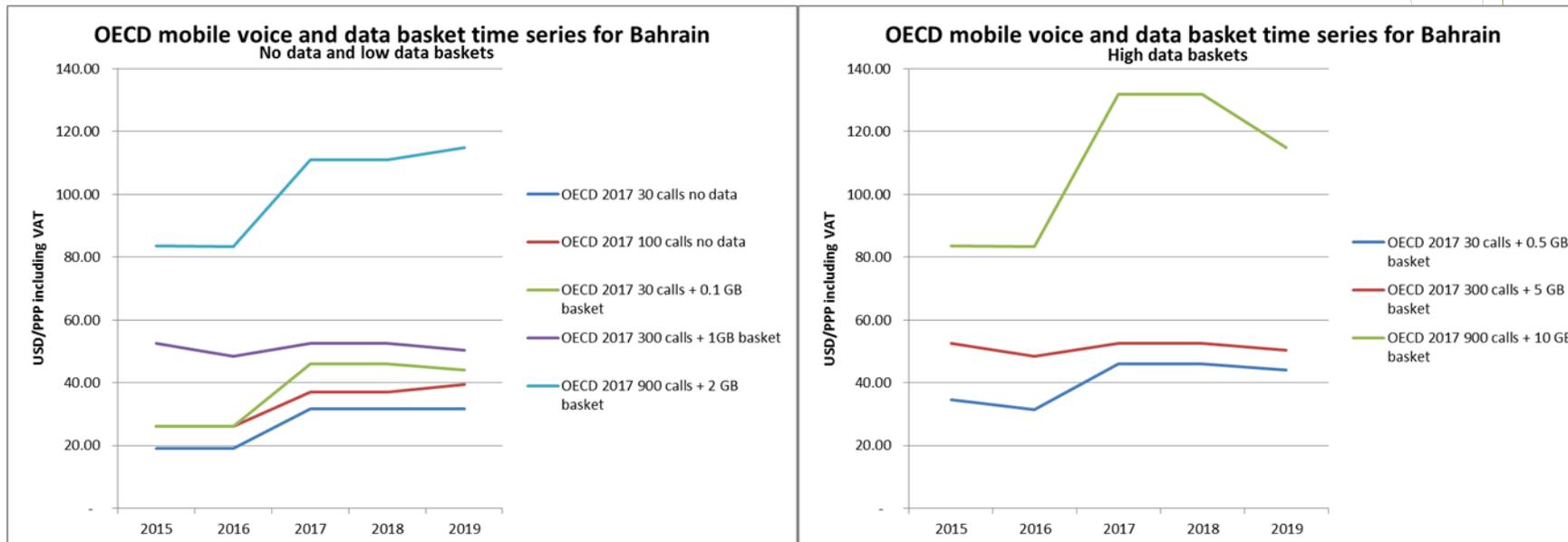
MOBILE BASKETS WITH HIGH DATA

- The higher data usage baskets show the Bahraini operators to be much more competitive across the GCC countries. The 30 calls + 0.5GB basket is still too low to show Bahrain in a competitive light, but the 300 calls + 5GB and 900 calls + 10GB, both Bahraini operators rank much higher (cheaper), and in particular, Viva Bahrain has the cheapest offer across the GCC countries for these baskets. Costs are on par with the GCC average but much higher than the OECD average.
- While most GCC operators continue to sit above the OECD average, for the 300 calls + 5GB basket, Viva Bahrain is on par with the OECD average. For all high data usage baskets, the Bahraini operators are consistently on par with or below the GCC average.



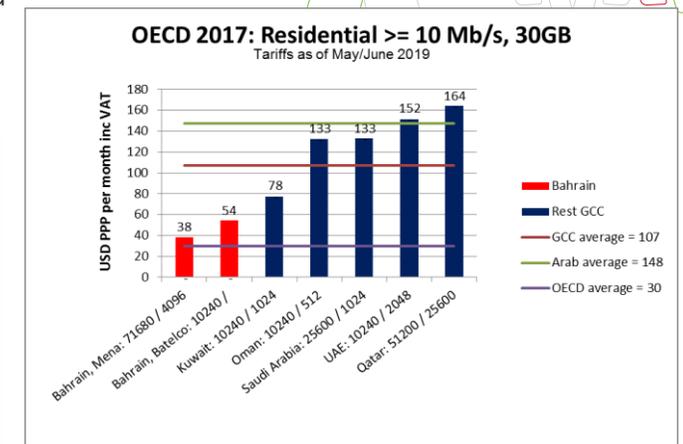
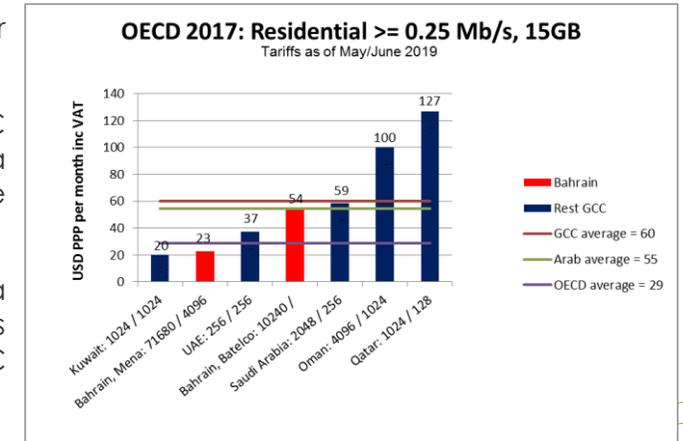
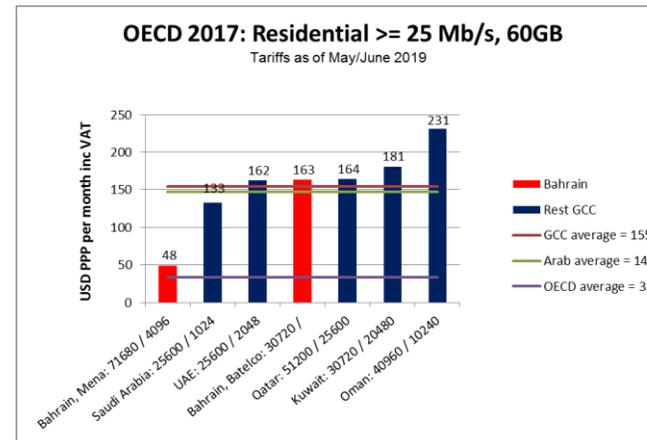
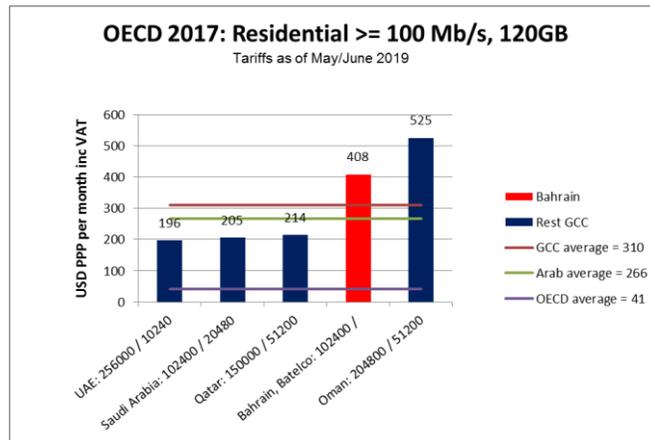
MOBILE BASKETS TIME SERIES FOR BAHRAIN

- Following a more volatile shift in prices in earlier years, due to the Bahraini operators focused on plans including relatively high data allowances, prices have either been much more stable, with either no or limited increases, and for very high (data) usage a decrease in costs.
- For most baskets, costs remained the same or fell slightly over the previous year. Where there were increases, these were relatively small.
- For a number of baskets, there has been no change to the cheapest plan.
- Since 2015, mobile costs have risen by around 35%, due to adjustment of plans around mobile data in particular, with the inclusion of much larger allowances, impacting the no and low data baskets in particular. 2019 saw the inclusion of VAT on residential offerings at 5%, which was countered in some instances by adjustments to plans and allowances. For the very high usage basket, 900 calls + 10GB, an extension of included minutes on the cheapest plan for this basket resulted in a significant overall cost reduction.



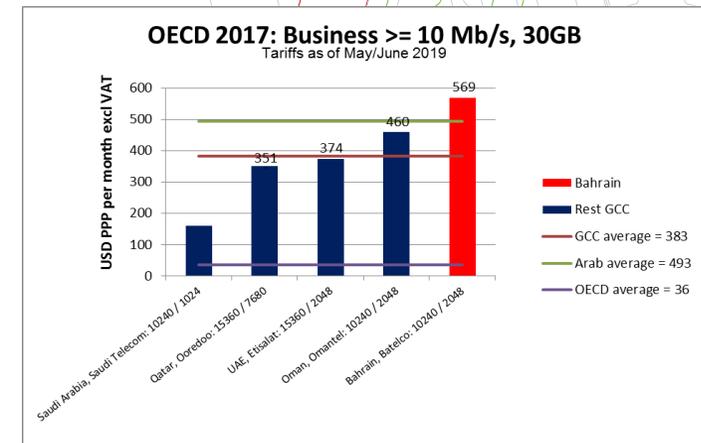
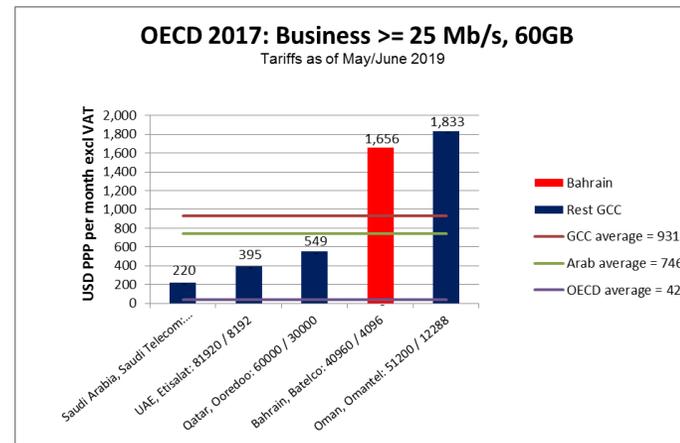
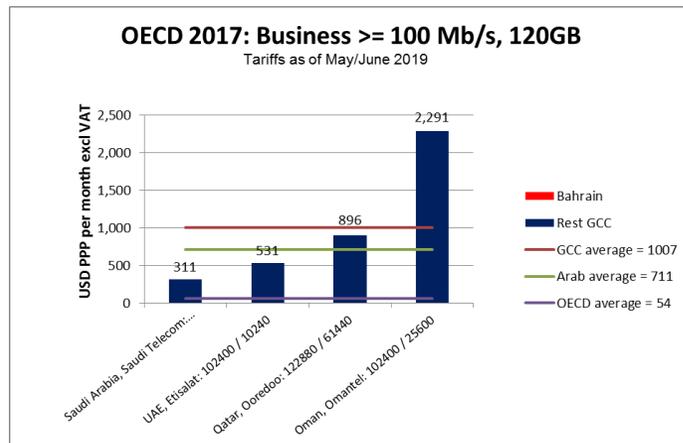
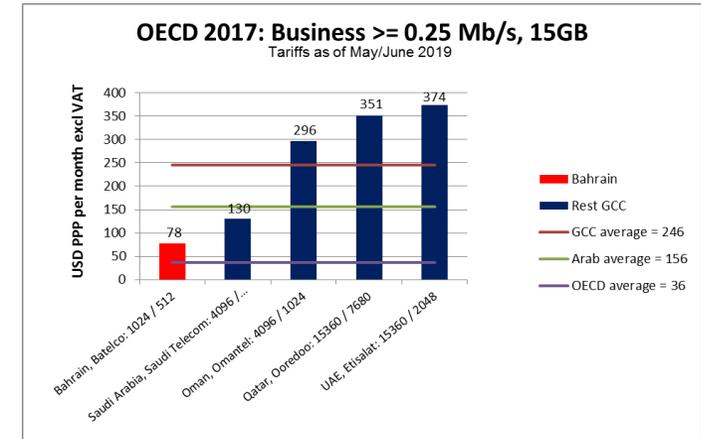
FIXED BROADBAND BASKETS, RESIDENTIAL TARIFFS

- Bahrain generally has very favourable fixed broadband pricing across the GCC countries, with costs for residential users among the lowest across the 6 countries.
- For all baskets with speeds ≥ 100 Mb/s, Bahrain is either cheapest or second cheapest across the GCC providers. The main reason for Bahrain's favourable position is due to low cost offerings from Mena. Mena offers an LTE-based, high speed service at low cost, which offers service at speeds of (up to) 72 Mb/s. The extent to which these speeds are achieved is not published.
- Batelco has a similarly priced offer for the ≥ 10 Mb/s basket, however, it is still more expensive than the Mena offer, and has a speed of only 10 Mb/s. For speeds above 100 Mb/s, as Mena no longer features (no services offered in this speed category), the position of Bahrain becomes much less competitive across the GCC countries.
- The OECD average is generally lower than both the GCC and Arab averages, particularly for the high speed basket, however, Bahrain is not significantly higher than this average for the three lowest speed baskets.
- The results shown, including average results are for medium usage OECD baskets.



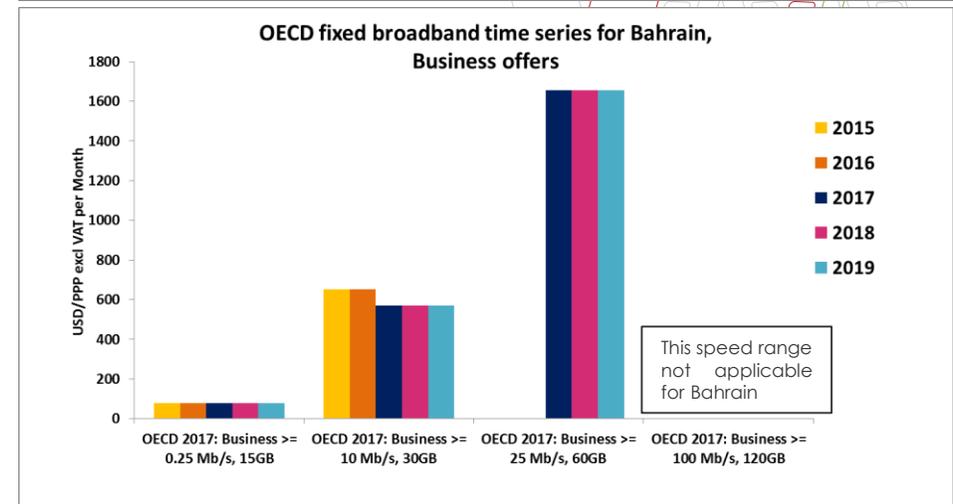
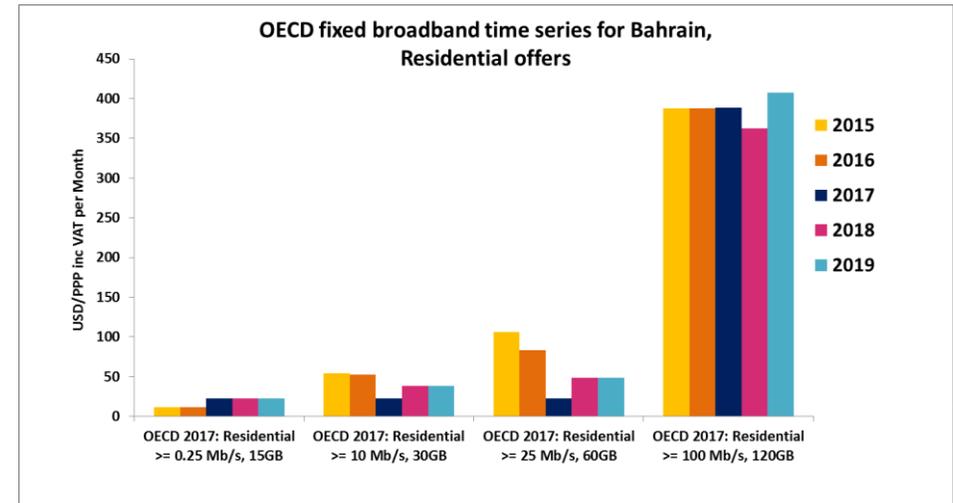
FIXED BROADBAND BASKETS, BUSINESS TARIFFS

- In contrast to the residential tariff basket results, the position of Bahrain when based on business services is a little more variable.
- When considering all services (i.e. ≥ 0.25 Mb/s), Bahrain has the cheapest offering. As the minimum speed requirement increases, Batelco jumps to being among the most expensive across the GCC. The respective speeds of service in each of the three baskets are 1 Mb/s, 10 Mb/s and 40 Mb/s. There are no business services available for speeds above 100 Mb/s in Bahrain.
- In general, there is a dramatic difference between prices for business services in Arab and OECD countries.
- The results shown, including average results are for medium usage.



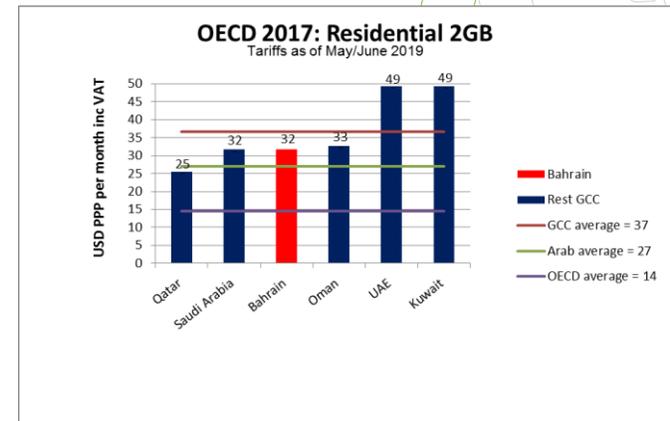
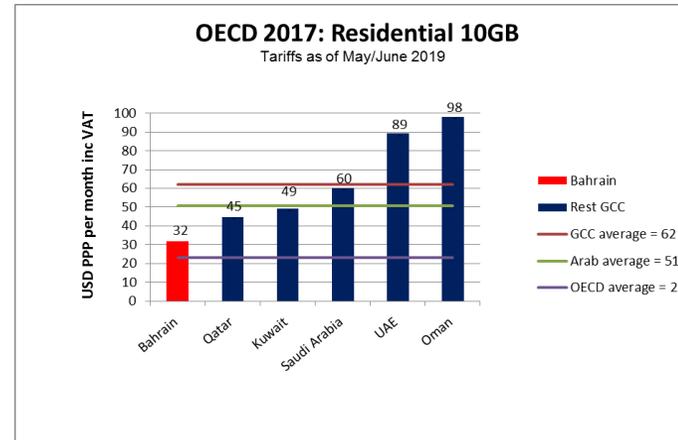
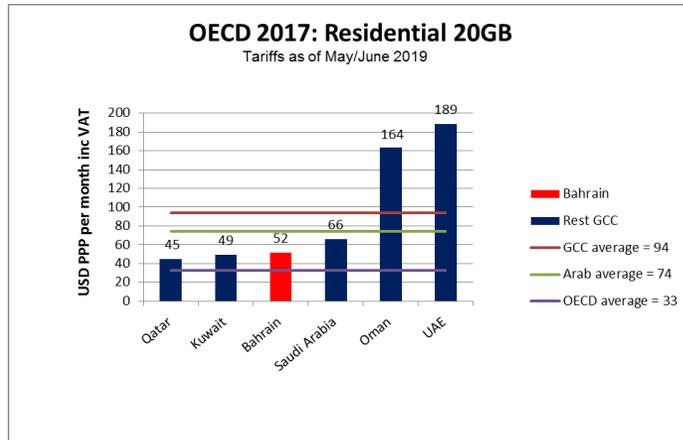
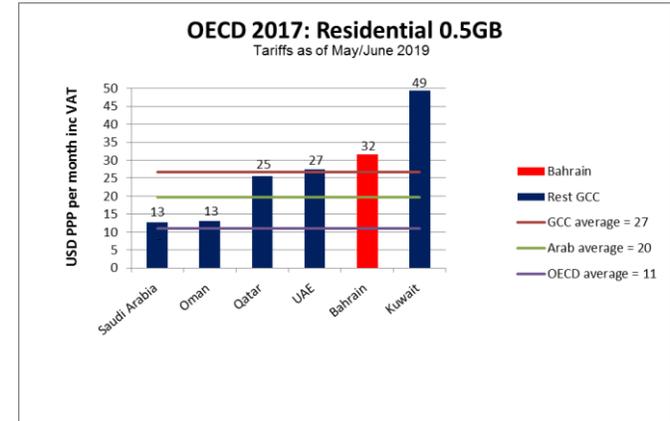
FIXED BROADBAND BASKETS TIME SERIES FOR BAHRAIN

- Since 2015, residential fixed broadband prices in Bahrain have generally fallen or remained relatively flat. This is also true over the period 2018-2019
- There is a fundamental difference in offers from Batelco, which are mainly distinguished by speed, and offers from Mena, which are mainly distinguished by data allowance.
- Business fixed broadband prices in Bahrain have remained generally static over time, with the exception of the reduction in the ≥ 10 Mb/s basket, where tariffs were reduced in 2017.
- Both Batelco and Mena made a number of changes to their residential offerings, including extending services to include unlimited usage. In general. However, these did not have any impact on the results.
- The Mena residential services have a nominal speed in the 60-70 Mb/s range.
- Actual experienced speed may be lower.



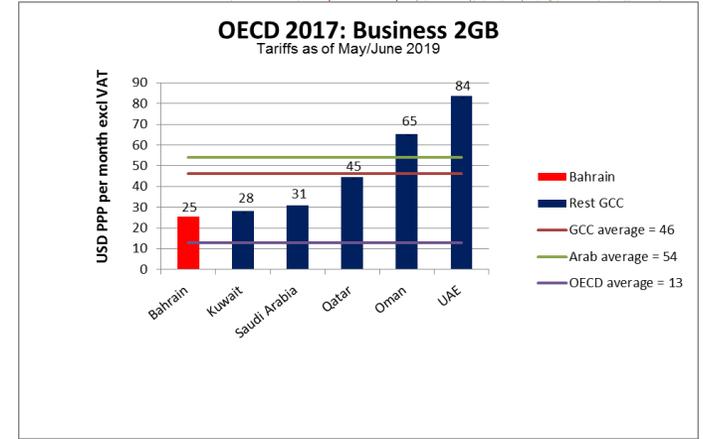
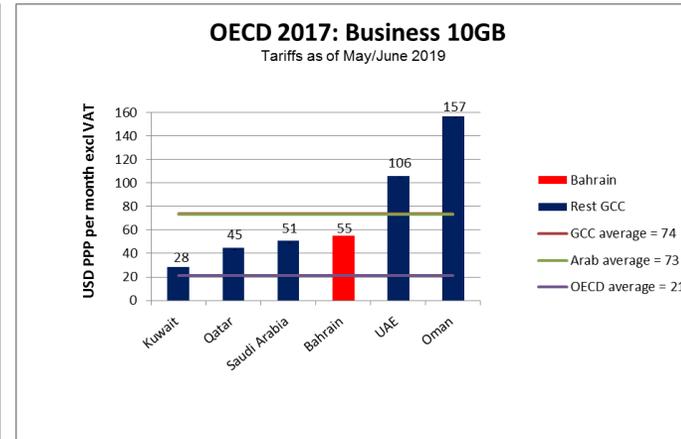
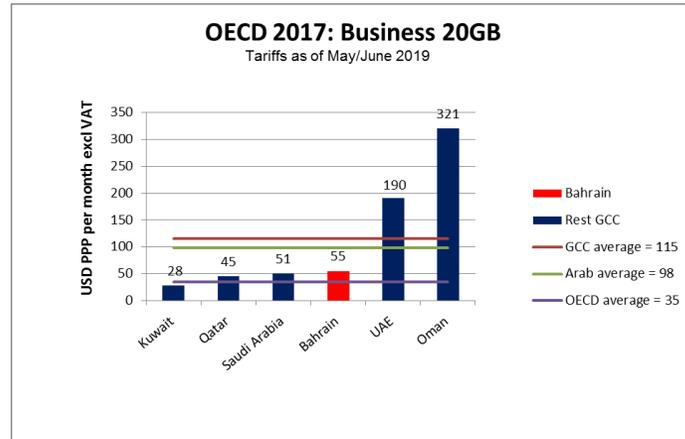
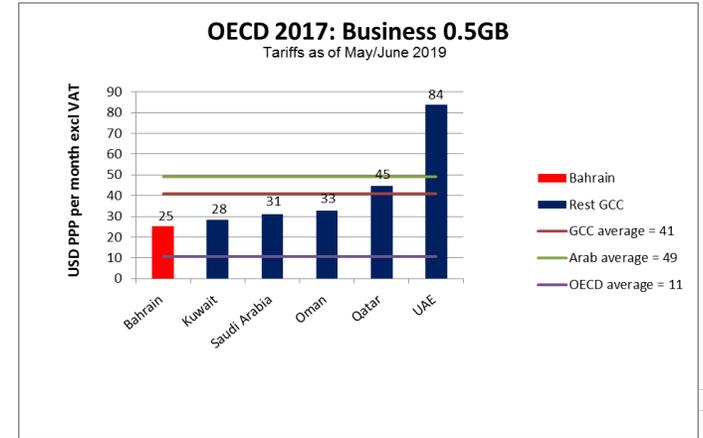
MOBILE BROADBAND BASKETS, RESIDENTIAL TARIFFS

- For lower usage, Bahrain generally has less favourable residential mobile broadband pricing compared to the other GCC countries, however, its position improves with increased data usage. This is a trend that has also been observed with mobile voice and data pricing.
- For a low usage basket of 0.5 GB, Bahrain is second most expensive, however, for a user requiring 10GB, Bahrain has the cheapest offering across the GCC countries, and is on par with the OECD average and well below both the GCC and Arab averages.
- Bahrain remains competitive for other baskets, too. For the 20GB basket, although it is ranked as third cheapest, after Qatar and Kuwait, it is not significantly higher in cost than either country.
- The OECD average is consistently lower than both the GCC and Arab averages.



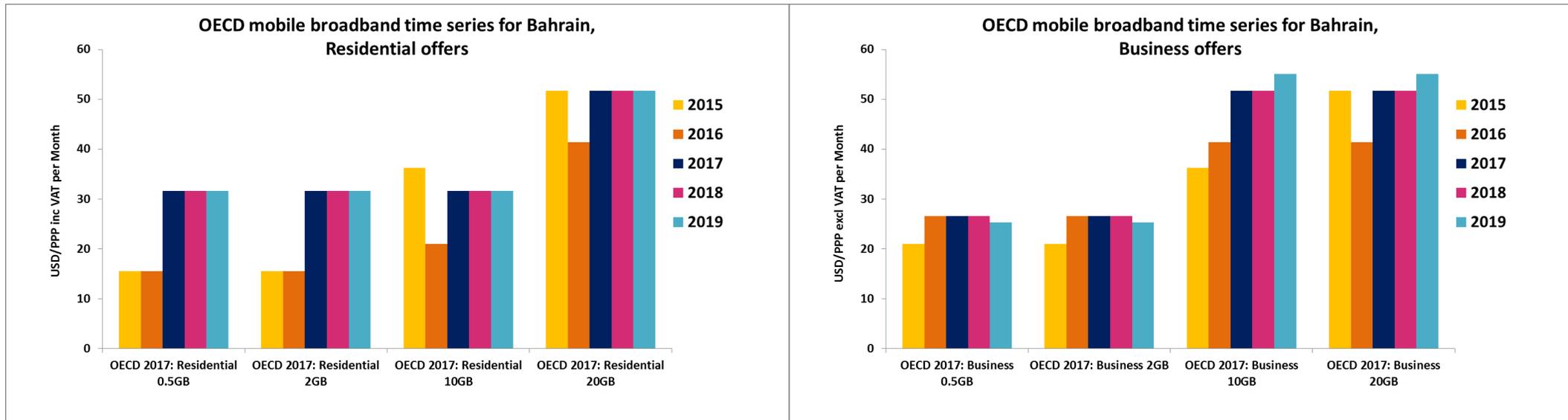
MOBILE BROADBAND BASKETS, BUSINESS TARIFFS

- The results for business mobile broadband for Bahrain are not dissimilar to the results for residential mobile broadband, however, the result for the low usage basket (with Bahrain the cheapest) is in contrast to the residential basket results, where Bahrain was close to the most expensive.
- Even though Bahrain is ranked less favourably for the higher use baskets, it is very much on par with most of the cheaper countries.
- In general, there is a stark contrast between prices for business services in Arab and OECD countries.



MOBILE BROADBAND BASKETS TIME SERIES FOR BAHRAIN

- There have been limited changes to mobile broadband pricing since last year. Residential pricing has been static.
- Higher usage is more likely to see more change in pricing over time, however, since 2018, residential did not change, and business pricing saw only relatively small changes (small decreases for the lower usage baskets and corresponding increases for the higher usage baskets, as a result of price and allowance revisions. A number of business packages increased in price).



RESIDENTIAL AGGREGATE BASKET ANALYSIS

- A simple aggregation of services for residential use has been constructed, based on three separate usage profiles, as follows:
- Low user: low usage across fixed and mobile voice, and with a requirement for only basic fixed broadband

| PSTN | Mobile voice | Fixed broadband |
|----------|------------------|-------------------|
| 20 calls | 30 calls + 100MB | >= 0.25 Mb/s, 5GB |

- Medium: a user who makes modest use of fixed and mobile voice and broadband services

| PSTN | Mobile voice | Fixed broadband | Mobile broadband |
|----------|-----------------|------------------|------------------|
| 60 calls | 100 calls + 2GB | >= 10 Mb/s, 30GB | 2 GB/month |

- High: a more intensive user, with high use of services, and with a requirement for higher broadband speeds than a medium user

| PSTN | Mobile voice | Fixed broadband | Mobile broadband |
|-----------|-----------------|-------------------|------------------|
| 140 calls | 300 calls + 5GB | >= 25 Mb/s, 180GB | 10 GB/month |

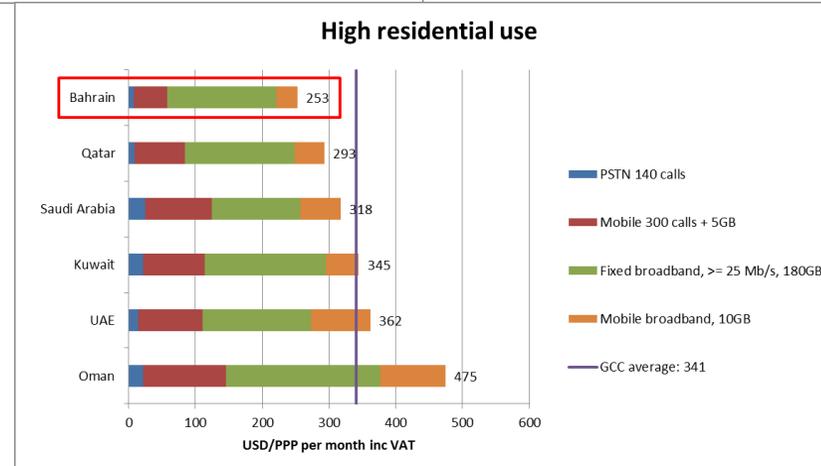
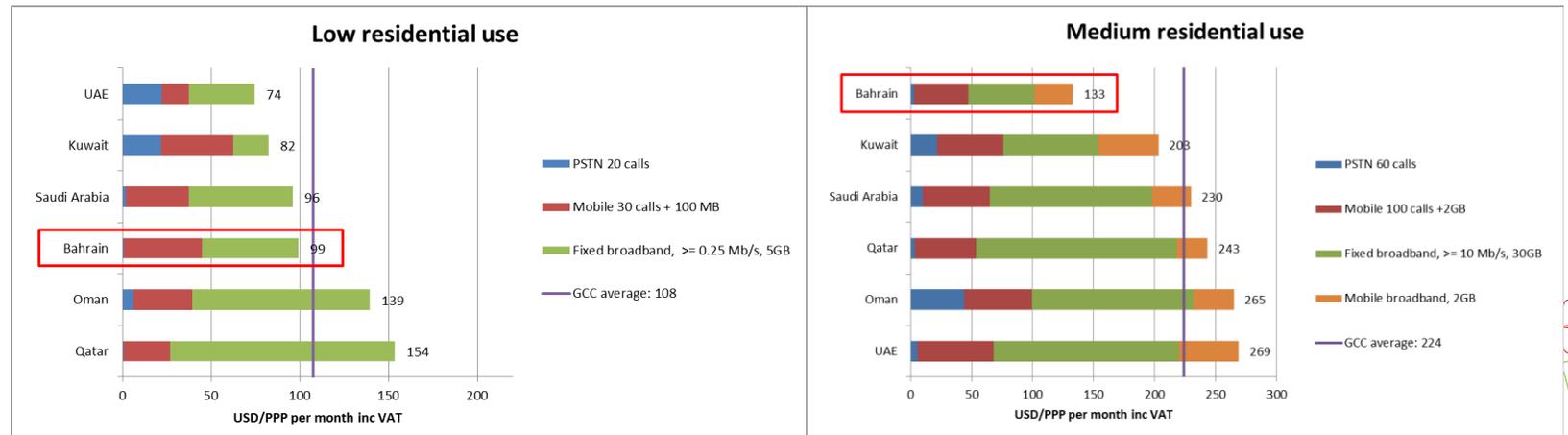
- For Bahrain, cost for both Batelco and Mena (Viva) have been considered separately, and a set of results provided for each. For the remaining GCC countries, only the incumbent provider for broadband has been used, as with the main standalone analysis.
- Each user profile has been costed by taking the result for each individual service basket, and summing to produce a total cost. This is a relatively simplistic method for considering multiple service use, however, it provides an indication of likely overall costs that different types of users will face.

RESIDENTIAL AGGREGATE BASKET RESULTS (BASED ON BATELCO)

For results based on Batelco fixed broadband services:

- Bahrain is the cheapest across the 5 GCC countries for both the medium and high residential baskets, and 4th (cheapest) across the 6 countries for low use. The low usage baskets costs are driven up by high fixed broadband and high mobile costs.
- For the low use basket, costs in Saudi Arabia are on par with Bahrain, while for the medium use basket, costs in Qatar are broadly on par.
- For all baskets, Bahrain sits below the GCC average.

Results based on fixed broadband services from Batelco



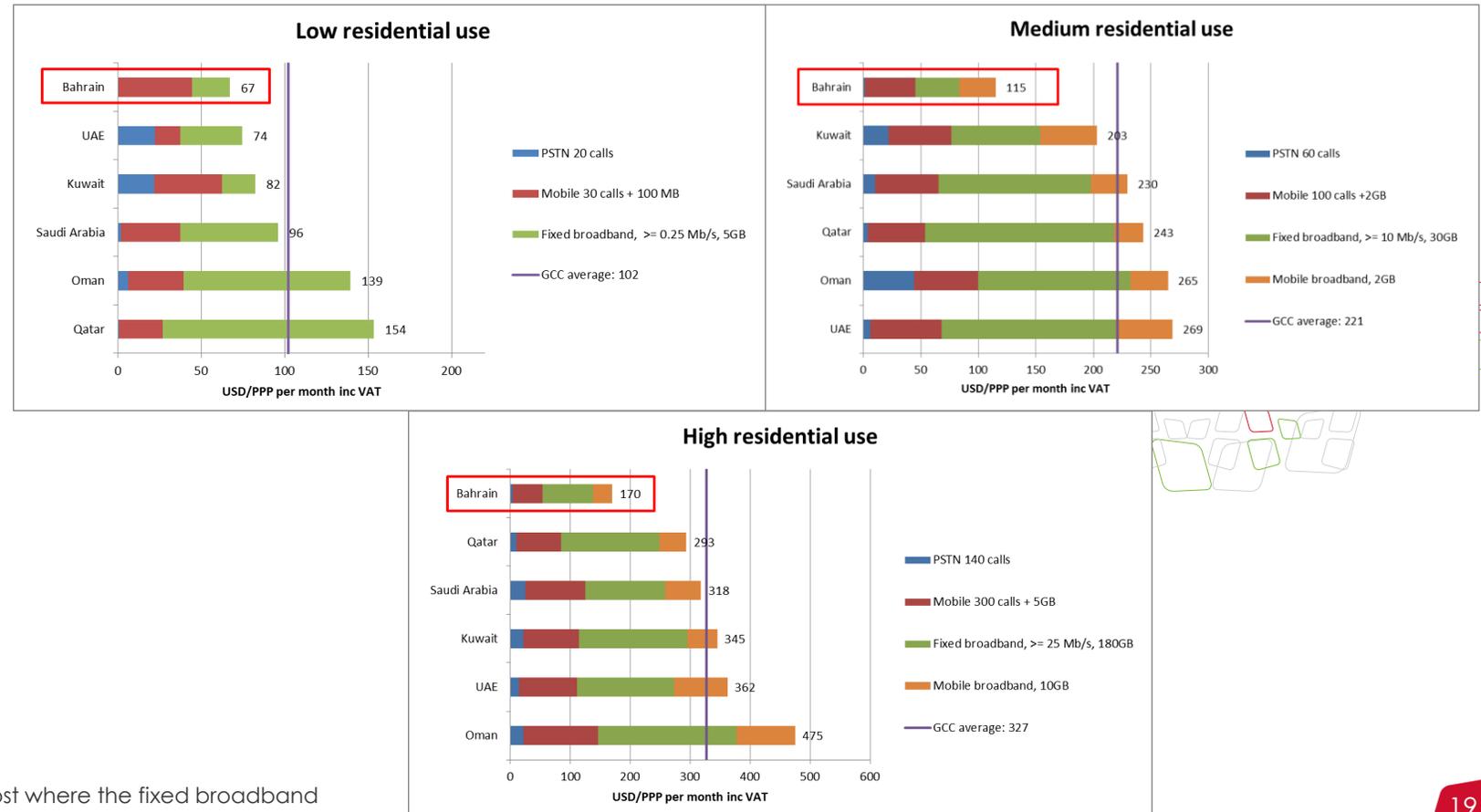
Results include any adjustment due to reduced cost where the fixed broadband offer includes fixed voice service.

RESIDENTIAL AGGREGATE BASKET RESULTS (BASED ON MENA)

For results based on Mena fixed wireless broadband services:

- Bahrain is consistently the cheapest across the 5 GCC countries for all baskets. The low cost of broadband is notable. Mena services include a number of free minutes and low cost calling once the minute allowance has been used up.
- For all baskets, Bahrain sits below the GCC average

Results based on fixed wireless broadband services from Mena



Results include any adjustment due to reduced cost where the fixed broadband offer includes fixed voice service.

BUSINESS AGGREGATE BASKET ANALYSIS

- Similar to the approach for residential use, a simple aggregation of services has been constructed for business use, based on two separate usage profiles, as follows:
- Medium: a user who makes modest use of fixed and mobile voice and broadband services

| PSTN | Mobile voice | Fixed broadband | Mobile broadband |
|----------------------|-----------------|------------------|------------------|
| 100 calls (business) | 100 calls + 2GB | >= 10 Mb/s, 30GB | 2 GB/month |

- High: a more intensive user, with high use of services, and with a requirement for higher broadband speeds than a medium user

| PSTN | Mobile voice | Fixed broadband | Mobile broadband |
|----------------------|-----------------|-------------------|------------------|
| 260 calls (business) | 300 calls + 5GB | >= 25 Mb/s, 180GB | 10 GB/month |

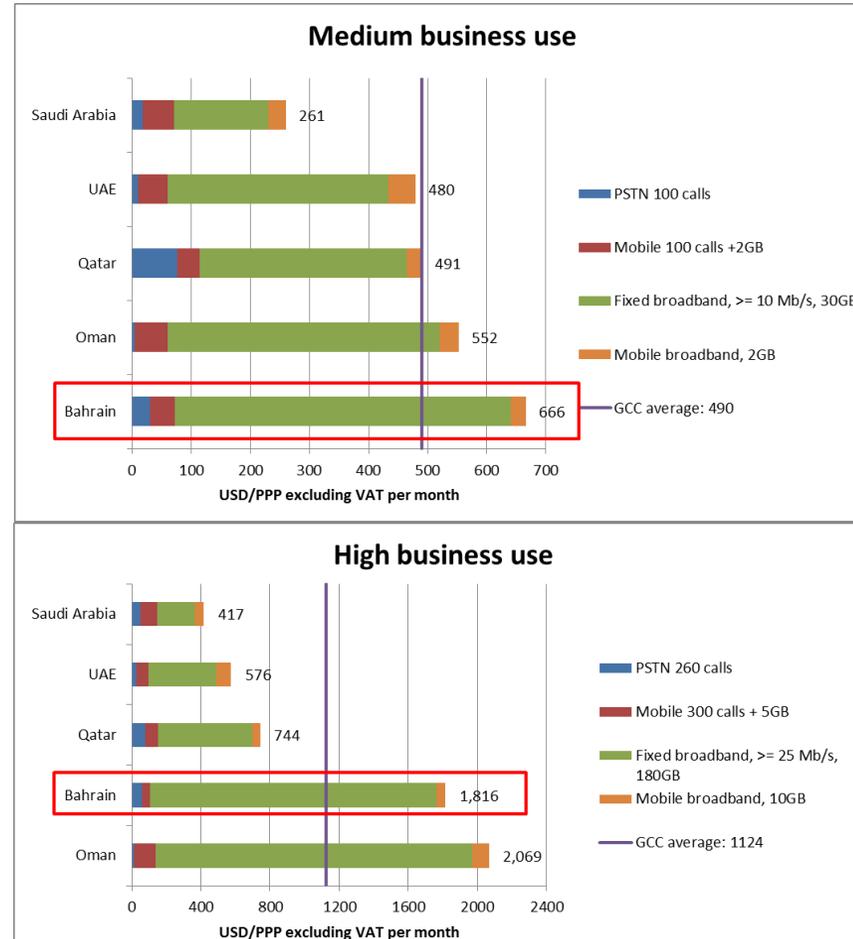
- The business profiles are similar to the residential profiles but use the business baskets (and business pricing) for fixed voice, and business pricing for fixed broadband. As many business users will use residential services for mobile, the results used for mobile voice and broadband services consider both business and residential offerings. For Bahrain, cost for both Batelco and Mena (Viva) have been considered separately, and a set of results provided for each. For the remaining GCC countries, only the incumbent provider for broadband has been used, as with the main standalone analysis.
- Each user profile has been costed by taking the result for each individual service basket, and summing to produce a total cost. This is a relatively simplistic method for considering multiple service use, however, it provides an indication of likely overall costs that different types of users will face.

BUSINESS AGGREGATE BASKET RESULTS (BASED ON BATELCO)

For results based on Batelco fixed broadband services:

- Based on Batelco fixed broadband services, for medium business use, Bahrain is the most expensive of the GCC countries, and the main reason for this is the very high cost for fixed broadband. While business broadband is expensive in many GCC countries, it is especially so in Bahrain. For high business use, Bahrain is the second most expensive country in the GCC, below Oman, but much higher than the GCC average.
- Due to some business tariffs not being published in Kuwait, it has been excluded from the business results.

Results based on fixed broadband services from Batelco



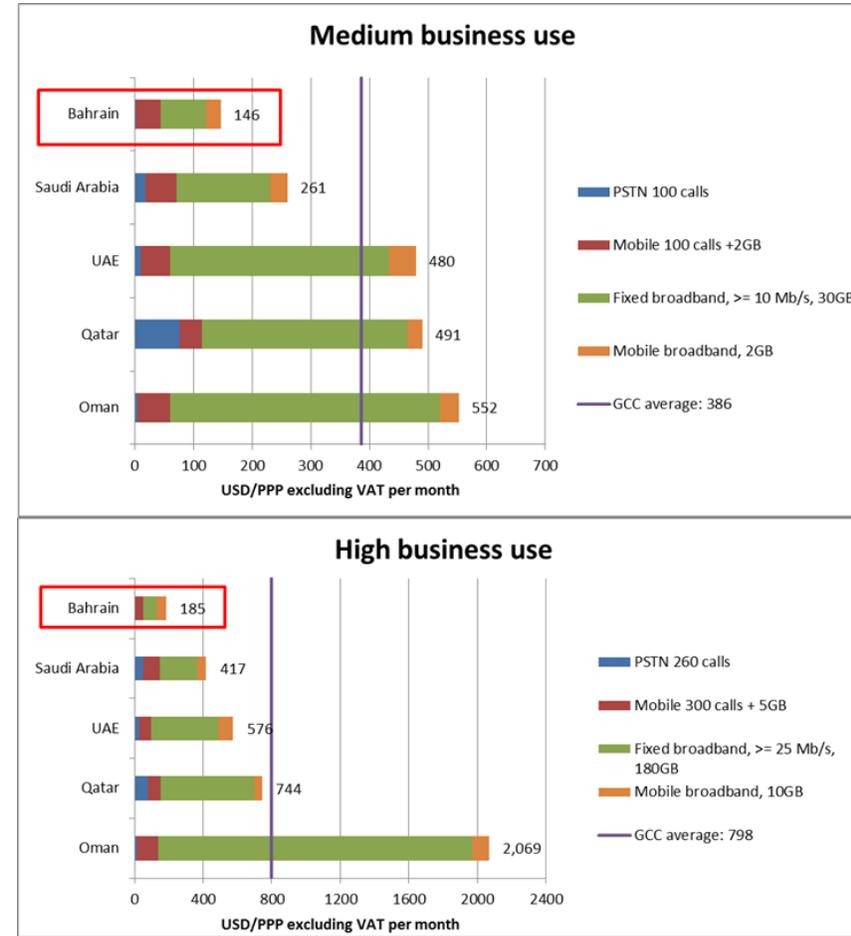
Results include any adjustment due to reduced cost where the fixed broadband offer includes fixed voice service.

BUSINESS AGGREGATE BASKET RESULTS (BASED ON MENA)

For results based on Mena fixed wireless broadband services:

- When using Mena fixed wireless broadband services, Bahrain is the cheapest of the GCC countries for both baskets, and by some considerable way, as a result of the low cost of fixed wireless services.
- Due to some business tariffs not being published in Kuwait, it has been excluded from the business results.

Results based on fixed wireless broadband services from Mena



Results include any adjustment due to reduced cost where the fixed broadband offer includes fixed voice service.

SUMMARY OF FINDINGS (1)

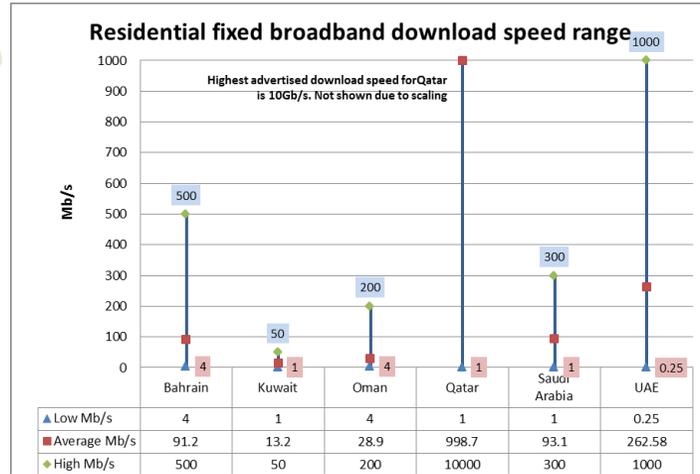
| | Bahrain results compared to GCC averages | Bahrain results compared to Arab averages | Bahrain results compared to OECD averages |
|-------------------------------|--|---|---|
| PSTN (Low usage) | | | |
| PSTN (High usage) | | | |
| Mobile (No and Low data) | | | |
| Mobile (High data) | | | |
| Fixed broadband (Low speed) | | | |
| Fixed broadband (High speed) | | | |
| Mobile broadband (Low usage) | | | |
| Mobile broadband (High usage) | | | |

| | |
|-------------------------|--|
| Better than ... | |
| On par with ... | |
| More expensive than ... | |

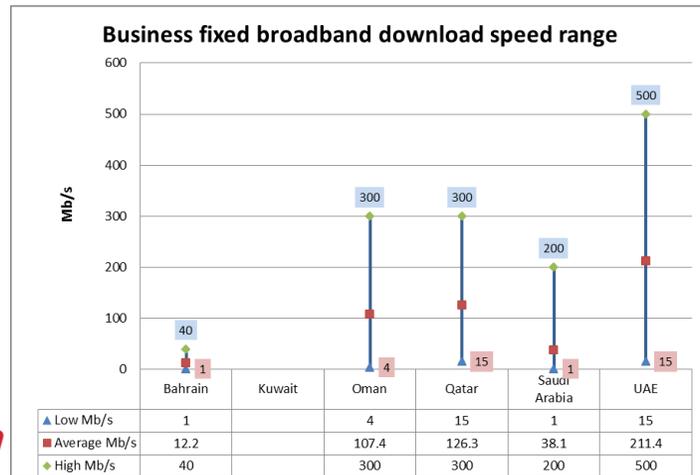
SUMMARY OF FINDINGS (2)

- Compared to GCC averages, the cost of telecoms services are typically below the GCC average.
- Similarly, telecoms costs in Bahrain are typically below or on par with the Arab average.
- When compared to the OECD average, however, for most baskets, most telecoms services, Bahrain is more expensive than the OECD average, and in some cases significantly so.
- This is true for fixed broadband and mobile services (both mobile voice and data, and mobile broadband)
- For fixed broadband services, many of the OECD countries have markets with multiple providers, resulting in strong competition which has driven down prices over time. In addition, providers have focused on increased speeds, with the rollout of fibre networks in in many countries.
- While fixed broadband services are subject to competition in Bahrain, prices from the largest provider, Batelco, have not changed significantly over time, and the cost for very high speed services in particular remains high. Fixed wireless offering from Mena Telecom are priced much more competitively, and for lower and mid range speed baskets, compare favourably to the OECD average (Mena services are not available for the > 100 Mbps basket).
- Similarly, across OECD countries, mobile services have seen continual declines in cost, and increases in data allowances, and this is likely to continue as 5G services are starting to be rolled out in a number of countries. Even though there has been a decrease in cost for higher data users, services for lower users, with no or very small data allowances, are still very prevalent.
- In Bahrain, by contrast, most mobile services include large data allowances, and pricing is geared towards higher usage, which means that, particularly for lower usage baskets, Bahrain compares less favourably against the OECD average. For mid-high data use (5GB), while Bahrain is still higher than the OECD average, it is much more on par than for very low or very high data use.
- Notably, for fixed voice services, Bahrain compares very favourably to OECD averages.

FIXED METRICS



| Residential | FBB-FV | FBB-FV-TV |
|--------------|--------|-----------|
| Bahrain | ✓ | ✓ |
| Kuwait | | |
| Oman | ✓ | |
| Qatar | ✓ | ✓ |
| Saudi Arabia | ✓ | ✓ |
| UAE | ✓ | ✓ |



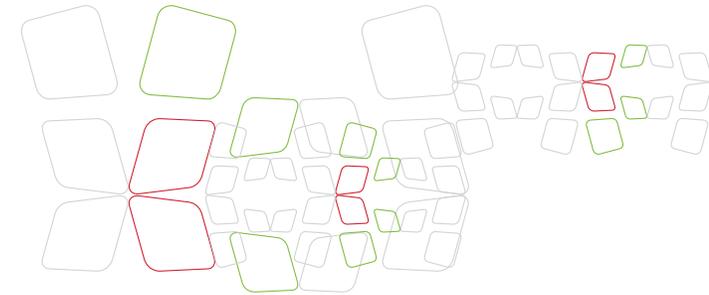
| Business | FBB-FV | FBB-FV-TV |
|--------------|--------|-----------|
| Bahrain | ✓ | |
| Kuwait | | |
| Oman | ✓ | |
| Qatar | | |
| Saudi Arabia | | |
| UAE | ✓ | |

- Fixed broadband and fixed voice subscriptions in the GCC countries are shown in the two leftmost graphs, while the two centre graphs show the range of advertised download speeds in each country.
- Residential services range from 0.25 Mb/s to 10 Gb/s (UAE), while Oman has the highest average – indicating more higher speed offers.
- For business services, UAE again has the greatest range of speeds, with a maximum offered speed of 500 Mb/s.
- In terms of bundled services, the two predominant bundle types are fixed broadband with fixed voice and fixed broadband, fixed voice and TV, which are available in most GCC countries. Kuwait does not have any bundled services, while Oman only has double play (FBB FV).
- Business services have significantly less bundled offers.

ACRONYMS USED IN THE CONTEXT OF THIS REPORT

- OECD: Organisation of Economic Co-operation and Development
- OECD countries: Australia, Austria, Belgium, Canada, Chile, Colombia, Czech Rep., Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Rep., Slovenia, Spain, Sweden, Switzerland, Turkey, UK, USA
- AREGNET: Arab Regulators Network.
- AREGNET member countries: Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, UAE, Yemen
- 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.
- 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

THANK YOU



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