



Telecommunications Sector Report 2018



Executive Summary

The Telecommunications, Radiocommunications and Broadcasting Regulator (TRBR) has this year produced its second Telecommunications Sector Report. It reports on the trends, state of the telecommunications market and ICT/telecommunications developments in Vanuatu in 2017 and builds on developments that have occurred since 2016. This Sector Report is primarily aimed at TRBR's stakeholders; Government, Industry, Consumers, Aid Donors and, more generally, the people of Vanuatu. This report is also available in electronic format on TRBR's website.

TRBR's first Report looked at the state of the telecommunications market in Vanuatu and developments that occurred largely during the period from 2014 to 2016, as well as looking at key events and developments in the industry since market liberalization in 2008.

This Report shows that there is continuous development of, and increased strength and growth in, the telecommunication industry in Vanuatu leading to increased growth in the economy together with the flow on benefits to consumers. The Report examines the trends and key market indicators covering: mobile services (such as mobile calls, mobile data and SMS), fixed telephony, internet data and market revenues, and provides an analysis on the overall performance of telecommunication sector in Vanuatu for the year 2017.

The competitive environment in Vanuatu's telecom sector has the momentum to continue developing in key areas of the market and is able to provide more enhanced and beneficial telecommunications services to enrich the social, cultural, custom and commercial fabric of Vanuatu. Importantly, the telecom sector has showed a healthy growth as

total market revenue of more than 5.3 billion Vatu in 2017; an increase of 20% over 2016.

The growth has been predominantly driven by the increase in the use of mobile services, with mobile telephony continuing to be the primary means of communication throughout the country. The ongoing development was driven and has been enhanced by TRBR's successful implementation of the Government's Universal Access Policy (UAP) leading to mobile coverage of the country in excess of 98% of the total population. (The Government specified at least 98% population coverage in its UAP and TRBR managed the achievement of a 98.8% population coverage). This, together with the heightened competitive environment, has led to the reduction in cost of mobile services, while increase in take up pushes handsets price down and has boosted mobile penetration rate to 82% at the end of 2017.

Mobile subscriptions grew significantly as demand for mobile services continued to dominate the market, and recorded a 4% increase in 2017. Although mobile call traffic has increased by 13%, revenue received from calls is trending downwards and has fallen by 17% in 2017. This follows a common trend worldwide as reported by other jurisdictions.

Furthermore, mobile call average advertised retail price has increase to 27VT per minute mainly due to the increase in Value Added Tax (VAT) imposed by the Government effective January 2018. However, if we consider the bundles that are being offered in the market, the prepaid average call bundle price has dropped to below 3VT per minutes and the postpaid average call bundle price has also fallen to below 13VT per minutes due to more call minutes offered in the bundle at a low cost.

The use of the Interchange Cable Network 1 (ICN1) submarine cable continues to stimulate internet access and capacity usage for both fixed and mobile networks, broadband services and large data download plans. International bandwidth has increased as total capacity including that procured by the Government has increased to 2,280Mbps by the end of 2017 reflecting the current competitive data bundles and improved speeds that consumers are experiencing.

Fixed internet subscriptions, particularly fixed wireless data subscribers, grew by 1% in 2017, while x Digital Subscriber Line (xDSL) subscriptions have grown steadily by 7%. Expansion in the subscription base has been driven and achieved by the attractiveness of promotional packages and bundles which were offered at a low cost along with reliable internet speeds. With the total number of such subscribers rising, total fixed internet revenue grew by 4% in 2017 compared to 2016.

Mobile data services through the use of Over the Top (OTT) service applications have now become a popular means of communication with the result that data volume continues to increase while call minutes are declining. Over the period of this Report, there has been a reduction in the price of mobile data together with increased coverage and services; largely through investment and innovation of new mobile technologies, such as LTE and 4G+ which supports greater data speeds, facilitated by the UAP rollout. This has stimulated a 24% growth in mobile data in 2017. Whilst, the advertised data bundle prepaid price is 50VT/MB. However, when considering the data bundles offered in the market, the prepaid bundle price has currently dropped to below 1.5VT/MB while average bundle postpaid price has dropped from 3000VT/MB to below 4VT/MB and this is due to bonus data offered in the data bundle.

The increased mobile data subscriptions together with the reduction of data price reflects the rapid growth of mobile data traffic which has grown by 143% in 2017. The increase in data traffic has boosted mobile data revenue by 72% in 2017.

SMS volumes dropped by 4% in 2017 and this resulted in a revenue fall of 14% to reach a lower point in 2016 and gradual rise by 1.5% in 2017 due to how SMS is been bundled and the increase in subscribers. However the overall trend for SMS revenue is declining. Furthermore, considering SMS bundles offered in the market, average prepaid bundle price per SMS has dropped to 0.92VT per SMS while average postpaid bundle price has also dropped to 7.79VT per SMS.

Fixed telephony has declined with subscription rates falling by 1% in 2017. Accordingly, fixed telephony revenue declined by 8% in 2017 reflecting the fall in the subscription base. This trend is expected to continue into the future as users continue to favor substitution of their fixed landline for a mobile service.

International outbound call traffic declined by 12% with revenue also declining by 19%. This trend is expected to continue leading to further decline as OTT services become further used for mainstream communication. International calls are, however, still utilized as the preferred means of communication by some businesses, corporate entities and Government sectors.

International roaming subscription grew in 2017 by 37% along with 33% increase in call minutes, however revenue dropped by 4%. There is a correlation between visitor numbers and inbound roamers causing fluctuation in call traffic over the year.

Key Indicators at a Glance

Indicators	2014	2015	2016	2017
Market Gross Revenue (Vatu)	3,888,029,298	3,947,901,705	4,479,794,173	5,380,136,834
Mobile Subscriptions	159,148	180,424	218,603	228,016
Mobile Data Subscriptions	56,317	78,216	101,438	125,366
Fixed Internet Subscriptions	3,959	4,297	4,386	4,543
Fixed Line Telephony Subscriptions	5,382	4,632	4,555	4,511
Total Domestic Mobile Call Minutes	213,572,542	226,189,426	241,751,930	274,078,926
Total Domestic Fixed Call Minutes	12,198,909	12,128,721	11,847,545	11,009,670
Total Outgoing International Call Minutes	4,320,780	4,247,112	3,453,917	3,034,243
Total SMS Sent	190,509,085	116,950,064	93,467,210	88,962,571
Total Mobile Data Downloads (MB)	16,251,427	85,435,487	272,693,622	663,137,542

Table of Contents

1. Introduction	7
2. Data Sources & Disclaimers	8
3. Key Trends in the Telecom Sector	10
4. Telecommunication Gross Market Revenue.....	11
5. Mobile Telephony Service.....	12
5.1. Mobile Subscriptions	12
5.2. Mobile Call Traffic	14
5.3. Mobile Call Revenues.....	15
5.4. Average Mobile Call Pricing	17
5.5. On-Net and Off-Net Call Pricing	18
6. Internet Services	20
6.1. International Bandwidth.....	20
6.2. Fixed Internet Services.....	22
7. Mobile Internet Services	25
7.1. Mobile Data Subscriptions	25
7.2. Average Price of Mobile Data	26
7.3. Mobile Data Traffic	27
7.4. Mobile Data Revenue VS Mobile Call Revenue	29
8. SMS Text Messaging	30
8.1. Average SMS Pricing	31
8.2. On-net and Off-net SMS /Average Revenue per Users.....	32
9. Fixed Telephony	33
9.1. Fixed Telephony Subscriptions	33
9.2. Fixed Call Revenue	34
10. International Calling.....	35
10.1. International Outbound Call Traffic	35
10.2. International Outbound Call Revenue	36
10.3. International Inbound Roaming.....	37
11. Conclusion.....	39

Table of Figures

Figure 1 Historical Telecommunication Revenues (Vatu)	11
Figure 2 Mobile Subscription and Penetration Rate.....	12
Figure 3 Percentage of Mobile Prepaid & Postpaid Subscription.....	13
Figure 4 Quarterly Domestic Mobile Call Minutes.....	14
Figure 5 Composition of On-net and Off-net.....	15
Figure 6 Domestic Mobile Call Minutes Revenue	16
Figure 7 Quarterly Average Mobile Call Pricing	17
Figure 8 Annual Average On-net and Off-net Pricing	18
Figure 9 Average Mobile Call and Data Revenue per User	19
Figure 10 International Bandwidth	20
Figure 11 Commercial Capacity	21
Figure 12 Quarterly Fixed Internet Services subscription.....	22
Figure 13 Quarterly Fixed Internet Revenue	23
Figure 14 Average Fix internet Revenue per Subscribers	24
Figure 15 Total Mobile Data Subscribers 2014 to 2017.....	26
Figure 16 Average Prepaid and Postpaid Mobile Data Pricing	27
Figure 17 Total Quarterly Mobile Data Traffic.....	28
Figure 18 Mobile Data Revenue VS Mobile Call Revenue	29
Figure 19 Annual Total SMS Revenue	30
Figure 20 Average SMS Price	31
Figure 21 Fixed Telephony Subscriptions	33
Figure 22 Fixed Call Revenue by Call Destination	34
Figure 23 International Outbound Call Traffic.....	35
Figure 24 International Outbound Call Revenue by Type of Call.....	36
Figure 25 International Inbound Roaming Call Traffic and Revenue	37
Figure 26 Visitors Statistics from Vanuatu National Statistics Office (VNSO).....	38

1. Introduction

This is the second Telecommunications Sector Report developed by TRBR, building on the first report in 2017 covering the period up to the end of 2016. It looks at the state, growth and development of the telecommunications market in Vanuatu. The report also examines current trends in the telecommunications market in Vanuatu together with key events and developments in the industry in 2017. This Report is also available in electronic format on TRBR's website¹.

The collection, analysis and dissemination of accurate and timely market information is critical for a wide-range of stakeholders as well as TRBR, and it plays a vital role in the design of effective, proportionate and efficient market regulation of a competitive telecommunications sector.

TRBR has always collected statistics for that purpose and continues to increase its collection of a range of detailed data and statistics from telecommunications service providers for awareness, to understand trends in the Vanuatu telecommunications markets, and to enable transparent information to be available to the Government, industry and the public.

TRBR thanks all the operators for honoring their commitment and submitting the required data to enable statistics, and this Report, to be developed and look forward to their continued cooperation. TRBR recognizes that the statistical data collected provides benefit for all stakeholders.

We welcome any comments or feedback on any aspect of this Report. For that, or should you require any more information about this 2018 Sector Report, please contact the TRBR via:

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2. Data Sources & Disclaimers

Under Section 8 (Information Gathering) of the Telecommunications, Radiocommunications and Broadcasting Act 30 of 2009 as amended by Amendment No 22 of 2018, TRBR has specific powers to request the provision, by telecommunications service providers, of information relevant to the exercise of any of the Regulator's powers or functions.

The data in this Report originates from various sources; however, the analysis presented is predominantly based on data collected in TRBR's bi-annual collection of market statistics from the industry, under TRBR's Order No. 1 of 2015 (Order 1) or information that is collected, ad-hoc, under the powers contained in the Telecommunications Licenses or Exceptions and the TRBR Act.

The data collected under Order 1 covers the previous 6-month period, from 1 January to 30 June and 1 July to 31 December respectively. Where this Report, or the prior Report, indicates a value for a period prior to 1 January 2015, that information has typically been provided to TRBR under prior reporting frameworks, or through an ad-hoc request for information by TRBR under Section 8(1) of the Act. TRBR is unable to confirm or deny the accuracy or consistency of data referring for the period of this report.

For information collected under Order 1 of 2015 when the data is a measure of volume, such as revenues and minutes, the information relates to the volume utilized or accrued during a specific monthly period. Where the information describes a variable that is a snapshot in time, such as subscriber numbers, then this tends to relate to the number of subscribers counted on the last day of the calendar month. For example, in relation to the number of mobile subscriptions, then this number represents the number of users that have initiated a chargeable event during the preceding 90- day period.

In instances where data relating to a measure of volume (e.g. a volume of usage such as total SMS sent, call minutes made, or revenues earned) is presented as a quarterly or annual value, TRBR has, at times, sought to combine specific values to provide more workable and useful insight on longer term trends. On occasions where a variable is a snapshot in time, such as for subscriber numbers, then TRBR has provided the value at the end of the calendar month that the stated period relates to; e.g. at 31 December for any annual subscriber values presented or the 31 March for the value for the first quarter of the year (i.e. Q1).

The Act, however, provides restrictions on the use and disclosure of information collected by TRBR under Section 8. Sub-section 8(7) states:

“(7) Information furnished or documents provided under this section must not be disclosed by the Regulator except:

- (a) with the written permission of the person from whom the same was obtained; or
- (b) in the course of proceedings under Part 9; or
- (c) was required by a court order; or
- (d) where, in the opinion of the Regulator, the information comprises, or will be reproduced in, aggregated data so that it does not identify any particular service provider; or
- (e) where such disclosure is required by this Act or any other law.”

TRBR is currently under no obligation under the Act to report on specific statistical indicators or to produce this Telecommunications Sector Report; and is only compelled to release its Annual Report. Therefore, the TRBR is currently restricted to only disclosing information which we have sought prior approval from the provider of that information, or where the information provided is in aggregated form.

In some instances, TRBR has chosen not to report on specific indicators so as not to compromise its adherence to Section 8(7) (d) and which might allow the disclosure of the specific service provider to which it relates.

The data used may be revised by the respondents or the TRBR when it appears inaccurate, an error has been made, or it was an estimate. Consequently, some prior year figures used previously, in other publications, have been revised. We also note that not all respondents were able to provide sufficient information in order for TRBR to appropriately compare or segregate or report on specific indicators, in such instances, TRBR has sought to combine or estimate specific indicators or values in order to display relevant information. In the case of estimated values, TRBR has indicated and/or attempted to provide further reasoning, if appropriate, where such estimations have been made.

In light of such challenges, TRBR does not make any warranties that the information in this report is free from inaccuracies, errors or omissions, is exhaustive, is of merchantable quality and fit for a particular purpose, and is not liable for any inaccuracy, error or omission in the information contained in this document.

3. Key Trends in the Telecom Sector

Below are the key trends identified from TRBR's market Data analysis of the year 2017.

- The total annual gross market revenue has grown from VUV4.5 billion in 2016 to VUV5.3 billion an increase of 20%
- Mobile penetration has increased to 82% in 2017, an increase of 16% from 2016
- Mobile subscriptions have grown by 4% in 2017
- Annual mobile voice revenue continues to decline in 2017, falling by 16%
- International bandwidth increased to over 2 Gigabits per second by the end of 2017.
- Fixed internet subscriptions (wire and wireless) increased by 4% from 2016 to 2017
- Fixed internet revenue increased by 3% in 2017
- Annual mobile data subscriptions grew by 24% in 2017
- Annual mobile data downloads (MB) increase by 143% in 2017
- Total annual outbound international call minutes declined by 12% in 2017
- The volume of total annual domestic SMS messages dropped by 5% in 2017
- Fixed telephony subscriptions dropped by 1% in 2017
- Annual fixed voice revenues also declined by 8% in 2017

4. Telecommunication Gross Market Revenue

Telecommunication services drive economic growth and have a significant and positive impact in Vanuatu on people's lives, in increasing business services and revenues, employment and provides innovative services that consumers can access and utilize, leading to efficiency dividends and potential cost savings.

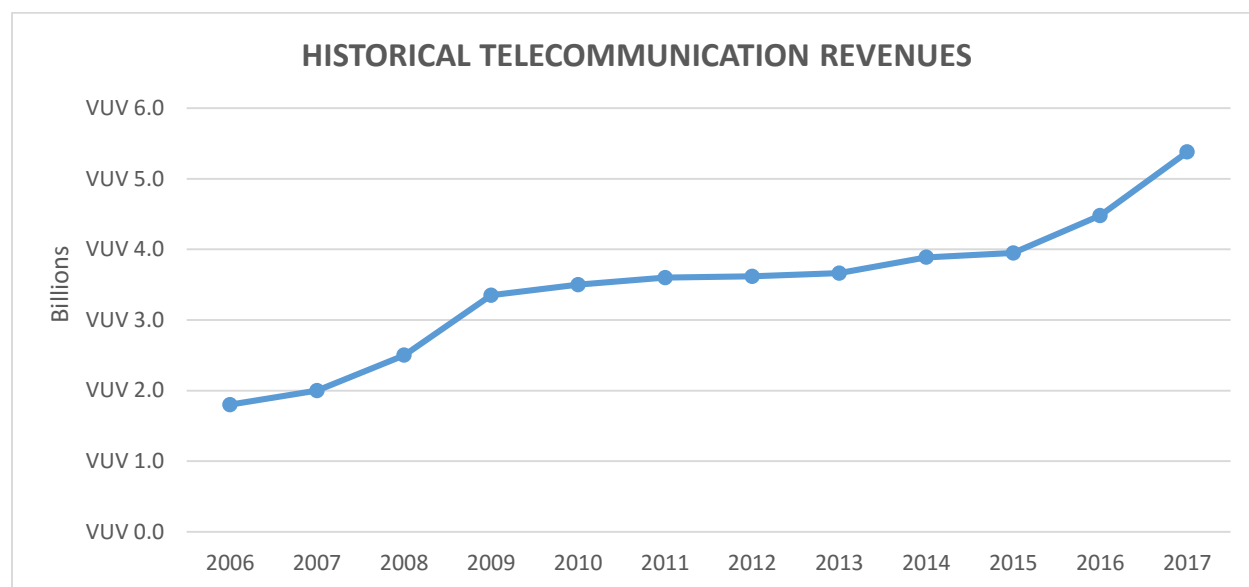


Figure 1 Historical Telecommunication Revenues (Vatu)

Figure 1 above shows Historical Telecommunication Revenues since 2006. The graph clearly illustrates that the strong underlying growth has occurred in 2016 which recorded a revenue of 4,479,794,173 Vatu which later grew by 20% to reach 5,380,136,834 Vatu in 2017.

The increase in market revenue as illustrated in Figure 1 was fueled by a number of factors: the increase in service coverage, the increase in new subscribers, the provision of new and innovative services and the significant increase in data consumptions.

The provision of new and innovative services is an important strategy that operators are currently deploying to generate revenue. With mobile coverage expanding to most of the unconnected areas within Vanuatu, and in excess of 98% of the population (98.8% actually) as a result of the successful implementation of UAP by the operators and TRBR, together with a reduction in wholesale pricing on ICN1 submarine cable filtering through to retail packages and stimulating internet access and usage, along with the UAP driven upgrade from 3G to 3G+ or 4G services all contribute to the rising call minutes, internet usage and large volume of data traffic respectively; which have continued to increase over each quarter in 2017.

These factors reflect the overall trend of a stimulated market with increasing market revenue in Vanuatu over the past two years; with the trend expected to continue for 2018.

5. Mobile Telephony Service

Note: The mobile phone services referred to in this section mean the provision of voice, data, and SMS services over a mobile handset.

5.1. Mobile Subscriptions

With TVL and Digicel as the providers of mobile services, and mobile connectivity being a primary vision for the Government and the sector as a whole, along with the successful implementation of the Government's UAP has provided for 98.8% of the population to have access to the network coverage, there has been sizeable growth in the customer subscription base, with more and more people wanting connectivity to a mobile network.

As shown in Figure 2 below, the current competitive environment has also stimulated growth with total mobile subscriptions rising steadily to reach 228,016 subscribers in 2017; an increase from 218,603 subscribers in 2016, and represents an annual growth rate of 4%. The number of subscribers is expected to rise in 2018 as users/consumers demand increases with widened consumer awareness of the potential to maximize their use of these services. This can also be expected based on TRBR's 2017 Consumer Survey, with one of the influencing factors of people's choice of using mobile services being based on the affordability of services provided and mobile handsets.

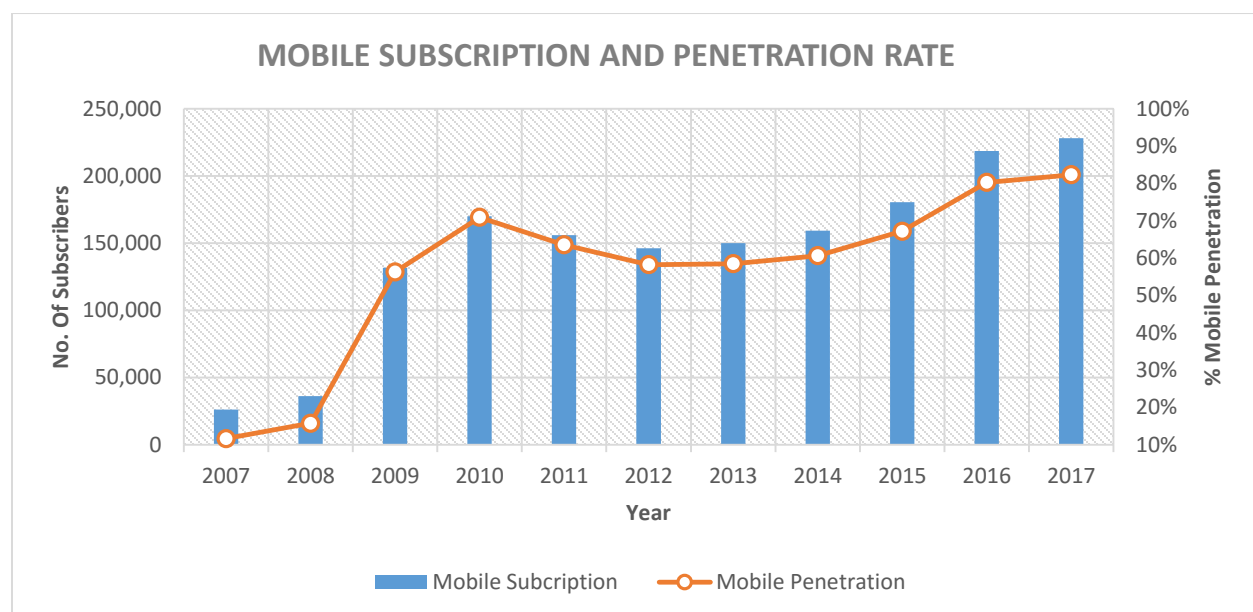


Figure 2 Mobile Subscription and Penetration Rate

An important factor causing the boost of mobile subscription growth is the dual SIM distortion where a consumer often owns two or more SIM cards, or multiple handsets, providing for access to both Digicel and a TVL service. This occurrence is in line with many overseas countries and needs to be considered when the

total number of subscribers for a country is considered. Also, the improvement in technologies such as 3G+ and 4G of the mobile networks is also contributing to the increased subscription rate because of the flow on positive benefits to consumers.

Figure 2 also provides for the mobile penetration to be determined. Mobile penetration is measured as the number of subscriptions as a ratio of the total population² and gives the percentage of population who actually own a mobile phone. The mobile penetration is continuously increasing with a now annual penetration rate of 82% in 2017 compared to 80% in 2016.

The mobile telephony market can be categorized into two categories of subscriptions: namely prepaid and postpaid. Prepaid subscribers pay for the services upfront before using it while postpaid subscribers received bill at the end of each month base on their actual usage .The prepaid service still dominates the market with 98% of the total number of mobile subscriptions being prepaid; as illustrated in Figure 3. This statistic primarily occurs since prepaid plans are a more affordable and convenient option for the majority of Vanuatu’s users. It is also a common theme around the world; but the percentages vary between postpaid and prepaid use. It is reasonable to say that this arises in Vanuatu because of the many income levels within the country, together with inconsistent cash flow, due to high portion of the population being unemployed, and a preference to only pay for what they use. Thus, contributing to the general preference towards the flexibility of prepaid Pay-As-You-Go (PAYG) plans.

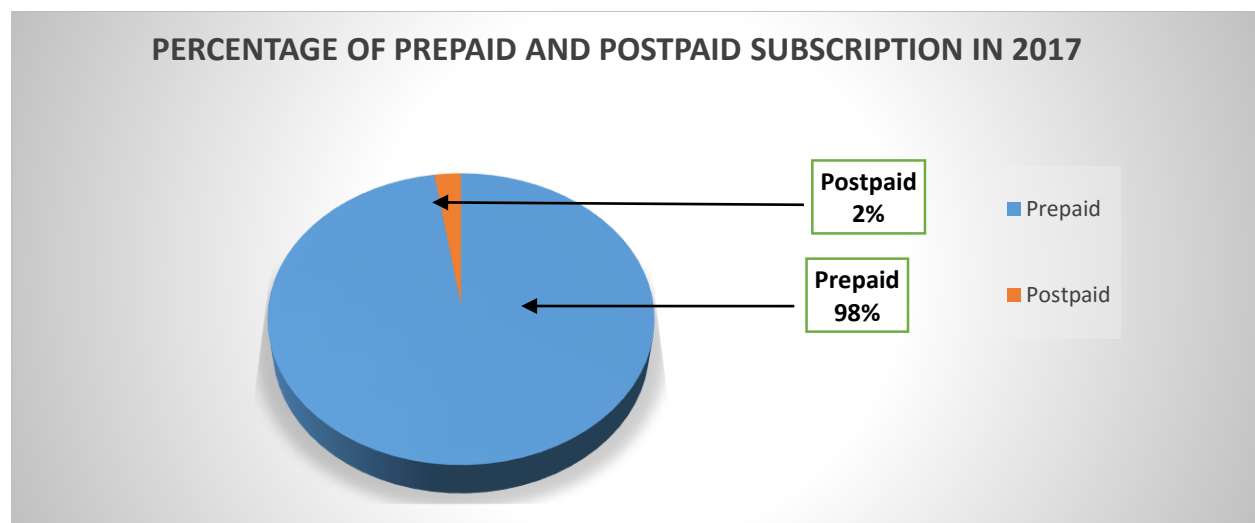


Figure 3 Percentage of Mobile Prepaid & Postpaid Subscription

² Vanuatu National Statistics Office, National Population and Housing Census 2009

5.2. Mobile Call Traffic

Mobile call traffic is measured by the duration of calls which are classified as domestic and international calls. For this Report call durations are measured in minutes.

The overall domestic mobile call volume continued to increase in 2017. Mobile call minutes grew from 241.7 million minutes in 2016 to 274 million minutes in 2017 at a growth rate of 13%.

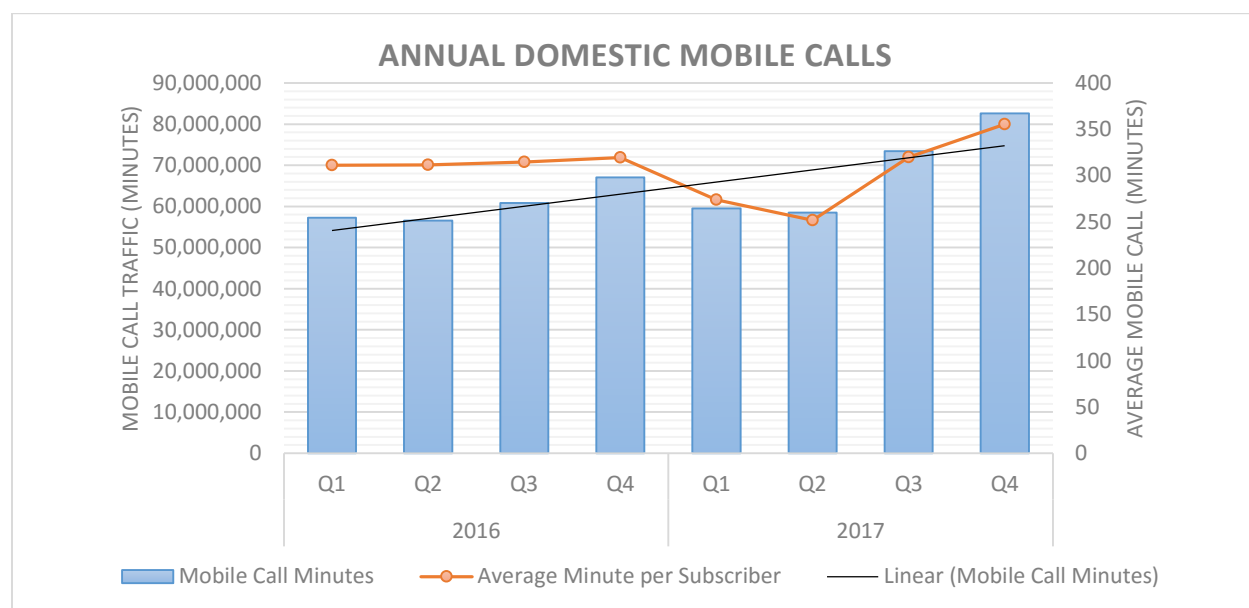


Figure 4 Quarterly Domestic Mobile Call Minutes

Figure 4 above illustrates the trend of mobile call traffic over the quarters of 2016 and 2017. The linear trend line shows the rising mobile call traffic despite some fluctuation over the mid-year of 2017. Mobile call volume reached its peak in Q4 of 2017 with 82.6 million minutes. This significant increase was due to the high volume of domestic prepaid mobile calls. Available data shows that yearly prepaid calls increased from 230.7 million minutes in 2016 to 262 million minutes in 2017.

The average minutes per subscriber trend has fluctuated somewhat, but has moved proportionately to the total volume of mobile calls. The trend was basically constant over the four quarters of 2016 at a range of 300 to 320 minutes per subscribers but it fell to a lowest point of 252 minutes per subscribers in Q2 2017. The average minute rate rose again by 11% to reach its peak of in Q4 2017.

Even though the sector shows a rise in the domestic call volume, when considering average minute per subscriber per year, the available data shows the annual average minute per subscribers is dropping recording only 1,202 minutes per subscriber in 2017; a drop from 1,228 minutes in 2016. This implies that subscribers are now slowly starting to spend less on mobile calls as their preference is directed to other substitute services such as Over the Top Services (OTT) which on the other hand boosting the growth of data usage and revenue.

The growing prepaid domestic call volume seems to have been stimulated by the large volume of mobile calls from on-net mobile-to-mobile services³ which on annual base increased from 218 million minutes in 2016 to 250 million minutes in 2017. At the same time off-net mobile-to-mobile services have fallen over the period and reached a lowest point in 2017 with 9.7 million minutes compared to 9.9 million minutes in 2016. And as illustrated in Figure 5 below, the composition of on-net and off-net traffic shows that the ratio of on-net calls is much higher at 97% while off-net remain very low 3%. This is because most of the bundling promotions that are currently offered by the operators are mostly prepaid on-net mobile-to-mobile plans, thus leads to minimal calls between operators or at least an asymmetric traffic pattern.

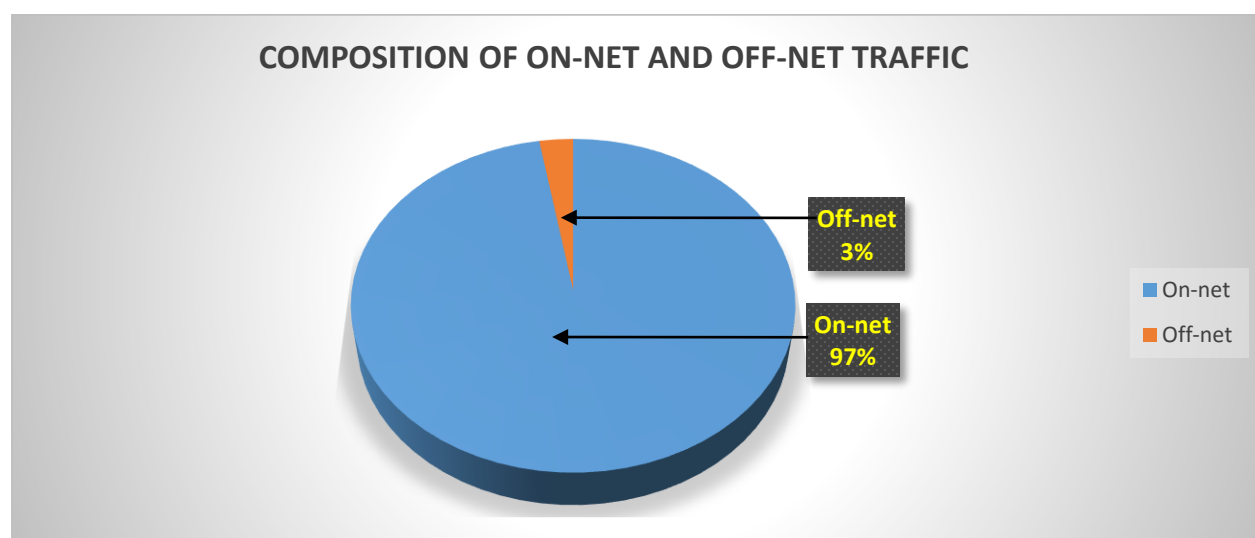


Figure 5 Composition of On-net and Off-net

On the other hand, even though total domestic postpaid call minutes declined by 1% in 2016 to 11 million minutes it has picked up to reach 11.7 million minutes in 2017 at a growth rate of 5.9%. This increase is also considered to be due to the cheaper cost of call packages, leading to an increase in volume of postpaid mobile to mobile on-net calls by 6% as well as mobile to mobile off-net calls which increased by 7.41% hitting 3.4 million minutes in 2017. This result reflects the growing number of postpaid subscribers which has increased to an average total of 5,516 subscribers in 2017; an increase by 17% from 2016

5.3. Mobile Call Revenues

Mobile call revenue has been the major contributor to income of the telecom industry. However, Vanuatu's telecom Sector, for the voice revenue is starting to drop as attractive OTT options have won customers and diverted significant recurring revenue from the mobile operators. This decline occurred in 2017 with voice revenue heavily falling from VUV 1.7 million in 2016 to VUV 1.4 million in 2017; falling at a rate of 17%,

³ An On-net call is a call within the same network e.g. a call from TVL number to another TVL number whereas Off-Net call are calls made to users on another network e.g. TVL call to Digicel number

despite the fact that mobile call minutes increased over this period. This decline is anticipated to continue and follows a world-wide trend of customers to adapt to and use OTT services.

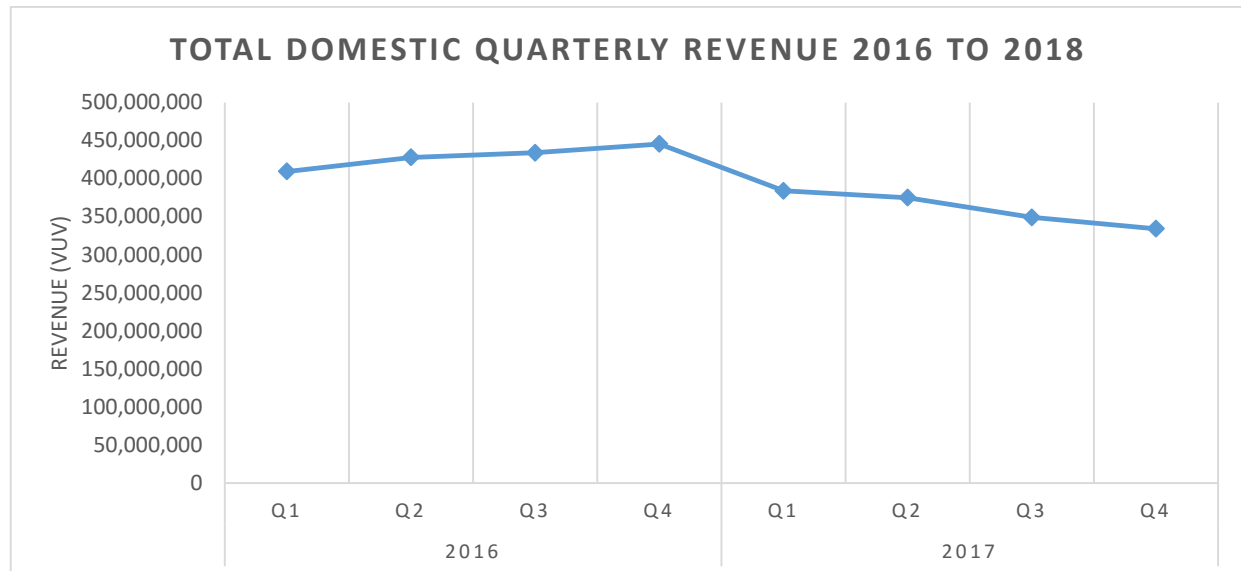


Figure 6 Domestic Mobile Call Minutes Revenue

Figure 6 clearly shows the drop in mobile call revenue from its peak in 2016. The falling trend has occurred after a peak in revenue in Q4 2016. Revenue had been steadily climbing in past years until 2016 Q4, then fell to VUV383.8 million in Q1 of 2017 by 13.84% and continued to drop reaching VUV334.0 million worth of revenue by the end Q4 of 2017

There are number of important factors that are currently contributing to the downfall of revenue as demonstrated in Figure 6. Firstly, intense price competition in the market has led to an increase in mobile call volume at a much lower price offered to customers as competition between operators in the mobile market has had the effect of them offering mobile calls at a cheaper rate making it more affordable for users. Furthermore, promotions and bundles offered by the operators have been more attractive to and cheaper for users so that they can now use a variety of services in the bundle but having to pay less for them. With the price dropping, it spiked an increase in the volume of mobile call minutes. However revenue has fallen as the lower price of services has directly affected the growth of mobile call revenue.

Mobile voice substitution is another factor that has played an important role in the decline in voice revenue. The highly competitive mobile market in Vanuatu has been affected by consumer use of OTT services and players - which offer apps and streaming content directly to consumers through the internet - and they have increased their market share in core communication services such as voice and messaging. WhatsApp, Viber, skype, messengers and many more, are already popular in Vanuatu, and users are now directing their preference to these services therefore driving an increase in use and purchase of data bundles as against voice traffic/revenue. As a result, the telecom sector has now started to face a significant decrease in voice revenue as customers substitute voice services for data services (OTT services).

5.4. Average Mobile Call Pricing

Price choices are currently a challenge to the operators as they fall short of the knowledge on customer's price sensitivity level and dynamics. However it has been the main component for the user's choice of services in the ongoing competitive environment from the market players through releasing of promotional offers and bundles at a cheap price affordable by the users.

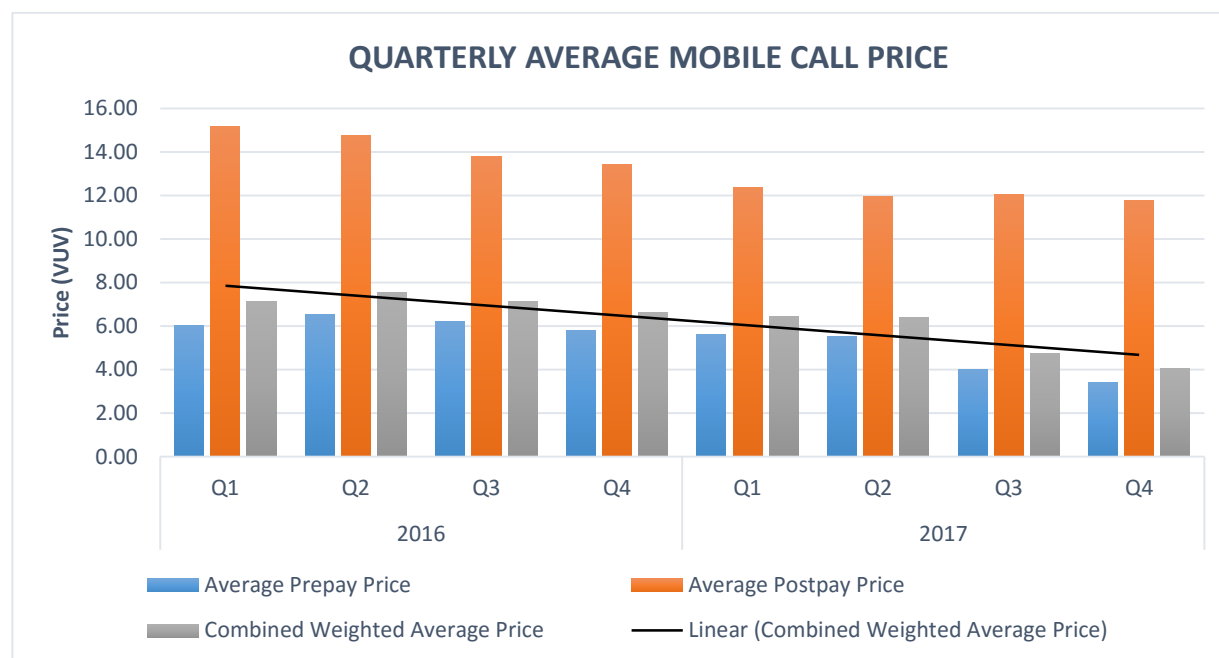


Figure 7 Quarterly Average Mobile Call Pricing

Figure 7 shows the average prices⁴ of prepaid, postpaid and combine weighted⁵ plans between 2016 and 2017. The increase in the Value added Tax imposed by the government in 2017 has meant that while averaging standard price for both operator, average standard price has increased to 27VT per minute. This standard price is basely the advertised or headline price imposed. The prepaid average price has dropped from 6VT in 2016 to 4VT in 2017. Moreover, the average postpaid price trend is descending as the shown by the graph reaching an average postpaid price of 12VT in 2017 compared to 2016 which was 14VT. Overall average price as shown by the combined weighted figures has dropped from 7VT in 2016 to 5VT by the end of the year 2017.

The overall trend indicates the start of a decline in average prices for both prepaid and postpaid; with prepaid price falling a faster rate. This reflects the fact that even though mobile call minutes have increased significantly in volume - especially for prepaid - revenue is also declining as the cost of mobile calls and promotional bundles offered are becoming cheaper; thus lowering the average prices. There is also

⁴ Average price is calculated by dividing revenue over volume of calls in minutes

⁵ Combined weighted price is calculated by total mobile call revenue divided by total domestic call minutes

evidence to show that a user’s preference in substituting voice services for data bundles as well as their use of OTT services has lowered the average price given voice revenue is declining.

5.5. On-Net and Off-Net Call Pricing

With prepaid plans and promotional bundles becoming cheaper and more affordable to users across the Nation, prepaid subscribers continue to rise boosting growth in the volume of on-net calls. On the other hand, operators have experienced a significant reduction in the volume of off-net calls hitting only 9.7 million minutes in 2017 compared to 9.9 million minutes in 2016. The effect on this is illustrated in the graph below.

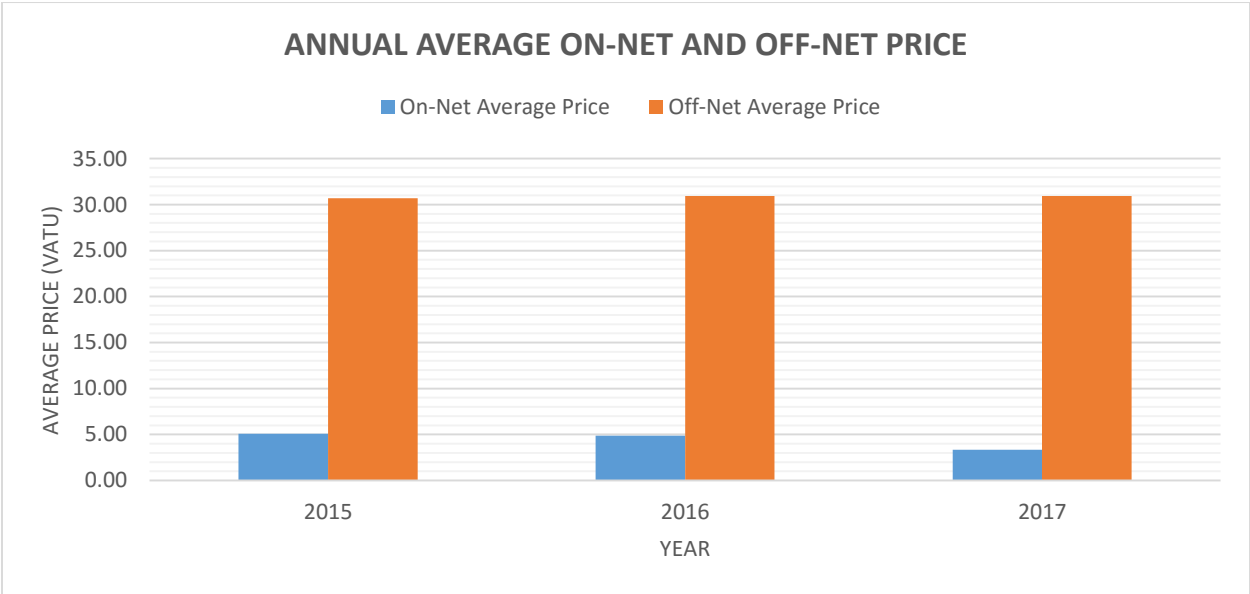


Figure 8 Annual Average On-net and Off-net Pricing

Figure 8 shows the annual average prepaid price for on-net and off-net calls. While the interconnection charge remains at 5.9VT – which it has been since 2016, the graph shows the average prepaid on-net price is falling while the off-net average price remains constant. The average prepaid on-net price has dropped from 4.88VT in 2016 to 3.36VT in 2017 even though mobile call volumes have increased. Again, this is due to an increase of on-net call bundles which makes it less expensive for users to purchase. For instance, Digicel ALL IN ONE and TVL WAO TOK package which both offer several hours of calls instead of up to only 10 minutes on the standard PAYG rate. On the other hand, the average prepaid PAYG price remains at 27VT per minute, however TRBR’s analysis shows that the average off-net price is 30VT per minute which is higher. Based on TRBR’s methodology in calculating the aggregate minutes and revenue for a given period, we can conclude that on-net and off-net pricing depends on the asymmetry in market shares. The increasing on-net traffic and revenue has a significant impact in reducing average on-net price while on the other hand forcing the off-net price to increase.

In contrast, the postpaid off-net price shows a different trend as off-net call volume continues to increase from 3.2 million minutes in 2016 to 3.4 million minutes in 2017. This is likely due to attractive bundled nature of postpaid packages which increase preferences of postpaid customers. The minimum postpaid⁶ package(s) has dropped: ranging from 1,750VT per month in 2017 compared to 3000VT in the past two years. Businesses are commonly attracted to these inclusive packages as there are no limitations on destination of domestic calls included in the bundles; thus customers can make calls based on their needs and preferences. Paying for postpaid bundles also means no additional cost incurred in the period of the promotion which could otherwise limit a customer's usage; especially from making off-net calls.

Figure 9 shows Average Revenue per User (ARPU) for both prepaid and postpaid plans and Average Mobile data revenue from 2016 to 2017. The statistics show that the ARPU for both prepaid and postpaid mobile voice is steadily declining; reaching low points of 1,190VT and 6,344VT respectively in 2017. Naturally, mobile operators wish to make up for this drop of revenue one way or the other. One way this has been offset is by increasing ARPU for mobile data revenue. The trend shows an upward tendency since 2016 which later offset prepaid mobile call revenue in Q3 2017.

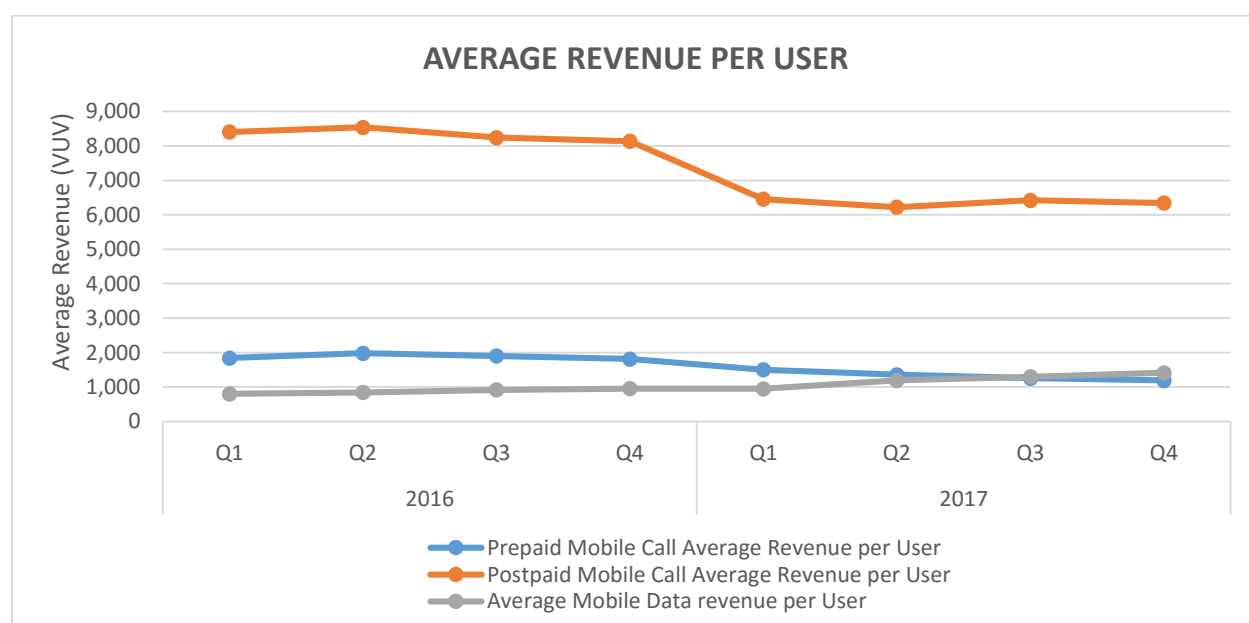


Figure 9 Average Mobile Call and Data Revenue per User

⁶ Average of the minimum postpaid prices from mobile operators in the market

6. Internet Services

Global internet usage continues to grow as demand for products and services that are available through computers, mobiles or other devices continue to increase. According to the International Telecommunication Union⁷ (ITU), 51% of the world's population have access to internet and this will continue to increase as demand continues to rise.

Vanuatu is well and truly part of this evolution of modern technologies which is stimulating internet usage. Even though most of the Internet Service Providers (ISP) of fixed internet infrastructure are located in Port Vila, Telsat, Wantok and Pacific Group Limited (PGL), continues to make internet services available through satellite broadband while Digicel and TVL make data available via mobile technologies and networks in both urban and rural areas. These two mobile operators can also provide services via Very Small Aperture Terminal (VSAT), however their focus in rural areas is via mobile networks and technologies due to lower operating costs involved.

Moreover, the TRBR's successful implementation of the Government's UAP has boosted internet usage in rural areas as students, teachers and the community at large have begun to see the importance and usefulness of internet services.

6.1. International Bandwidth

The use of the ICN1 submarine cable has continued to stimulate growth of internet usage since 2014. Total International bandwidth continues to increase since Interchange Limited (ICL) entered the market following Fidelity Communication Corporation's (FCC) decision to no longer supply wholesale bandwidth services.

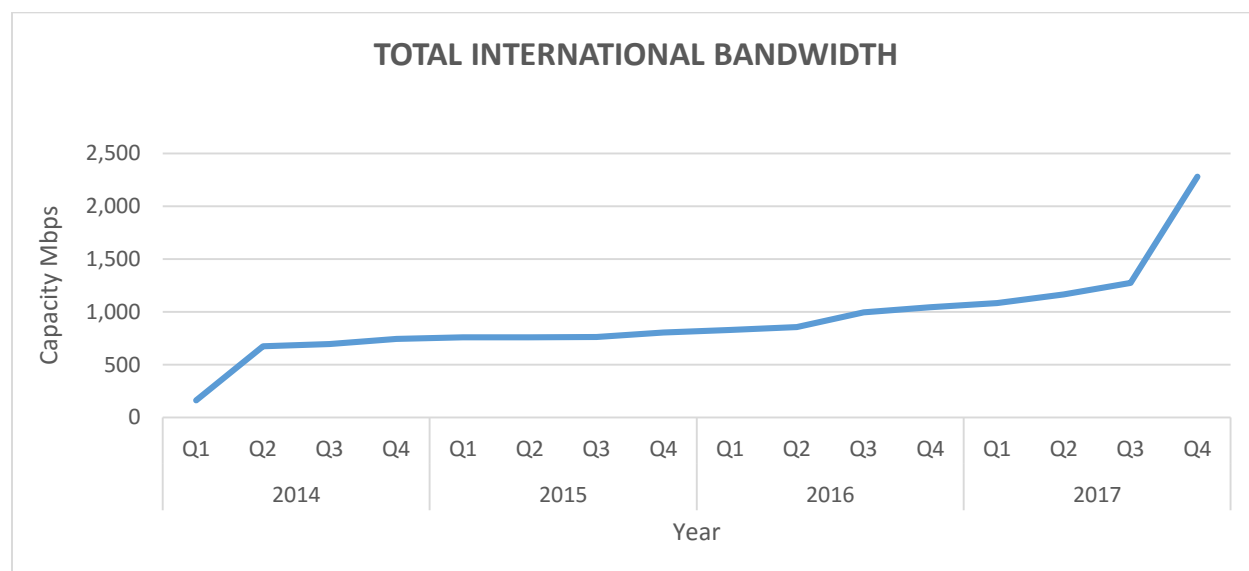


Figure 10 International Bandwidth

⁷ More details from ITU Website <https://www.itu.int/en/ITU/Statistics/Documents/facts/ICTFactsFigures2017.pdf>

Figure 10 shows the total international bandwidth since 2014. The introduction of the subsea telecommunications cable in 2014 the positive increased International bandwidth in Vanuatu. Internet capacity stood at 160Mbps in Q1 in 2014 and immediately accelerated by 321% to 674Mbps in Q2 2014 with its introduction. It then, steadily rose over the years until Q3 2017 when the market then experienced a steep increase in capacity of 2,280Mbps in Q4 2017.

The rapid increase in internet capacity has been driven by; increasing consumer demand, TRBR's intervention into the wholesale market of international bandwidth requiring the wholesale supplier (FCC) to lower its wholesale price per Mbps by 29% and the reentry into the leased wholesale market by ICL at the end of 2017. These regulatory changes boosted demand of bandwidth by ISPs and the Government, and has helped stimulate growth in mobile data traffic and internet usage as the subscription base expands.

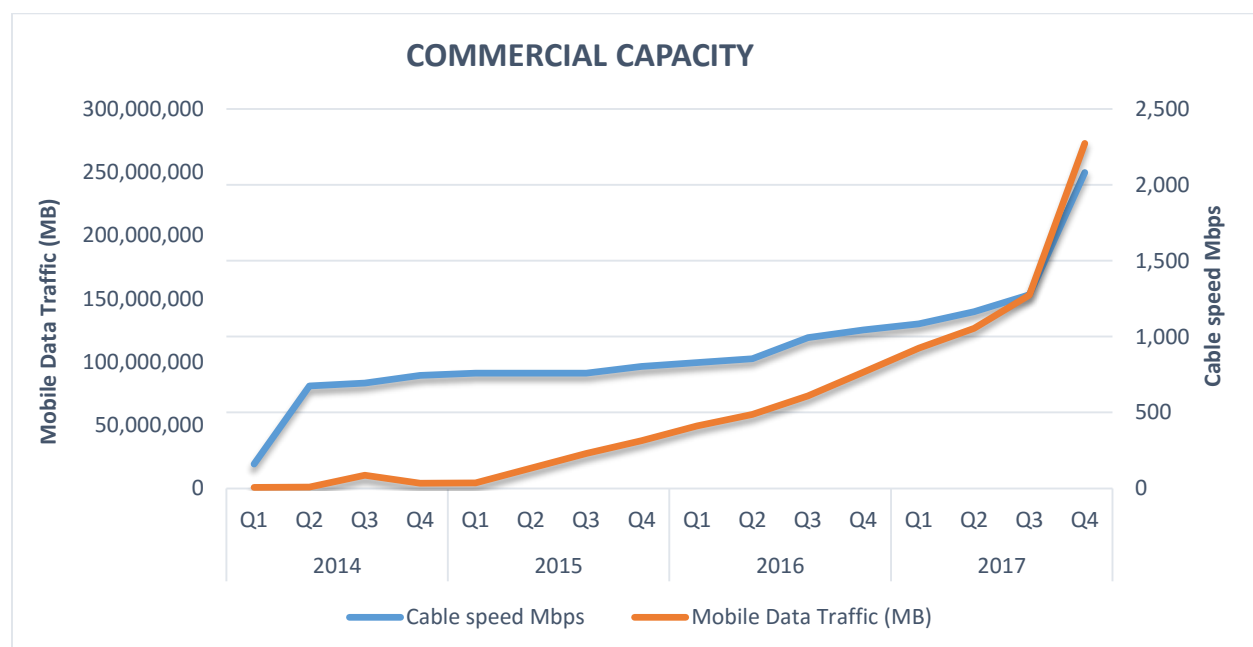


Figure 11 Commercial Capacity

Figure 11 shows the commercial capacity⁸ and mobile data growth since 2014. The graph clearly shows that mobile data traffic grows as internet capacity increases. The effect of price reduction on the wholesale price has boosted demand of bandwidth stimulating a rapid increase in the mobile data growth which appears to have out stripped commercial capacity available. This implies that demand is limited by international capacity available which is limited by the price that the operators are willing to pay. In other words, if the wholesale price was lower more capacity would be offered leading to more consumer demand for data.

⁸ Commercial capacity is that capacity available to the Retail Service Providers and does not include any capacity allocated to the government

6.2. Fixed Internet Services

Fixed internet services relate to broadband internet services provided via fixed networks, and generally means to a fixed position. Services can be provided by fibre, copper or via wireless. They are all considered as fixed if the site it is being provided to is fixed (like a house, shop or office).

As internet services demand increase, many consumers now connect their devices at home or work place via wireless router; even if it is a fixed line broadband connection to the internet. This is considered to be fixed line services rather than wireless service as the underlying internet connection is via a fixed line connected to customer's premises.

Currently, there are wide range of fixed internet technologies available in Vanuatu such as ADSL, WiMax, fibre optic cable as well as Wi-Fi and fixed 4G. For the purpose of this report, xDSL fixed subscriptions and fixed wireless (including fiber) subscriptions were used to analyze the fixed internet service usage in the telecom sector.

With access to the submarine cable available and Wantok's 4G network established, wholesale price reduction for internet bandwidth by Interchange Limited continues to enhance growth in the fixed wireless data subscriptions; reaching 2,517 subscribers in 2017 compared to 2,497 subscriptions in 2016. xDSL access subscriptions on the other hand can be seen to have only gradually increased over the period of this report reaching a high point of 2,026 subscriptions in 2017. Figure 12 shows the number of subscriptions over the 2016 – 2017 period. Both services can be seen to be climbing, but only at a very slow rate; with some fall and then another rise during this period. This is due to increase in take-up and availability of attractive bundles packaged which attracts more users to subscribe for the services. Furthermore, the disparity also shows that fixed wireless service subscriptions continue to out shadow xDSL subscriptions and it is more preferable across the market as setup cost and time associated in establishing such access is much lower.

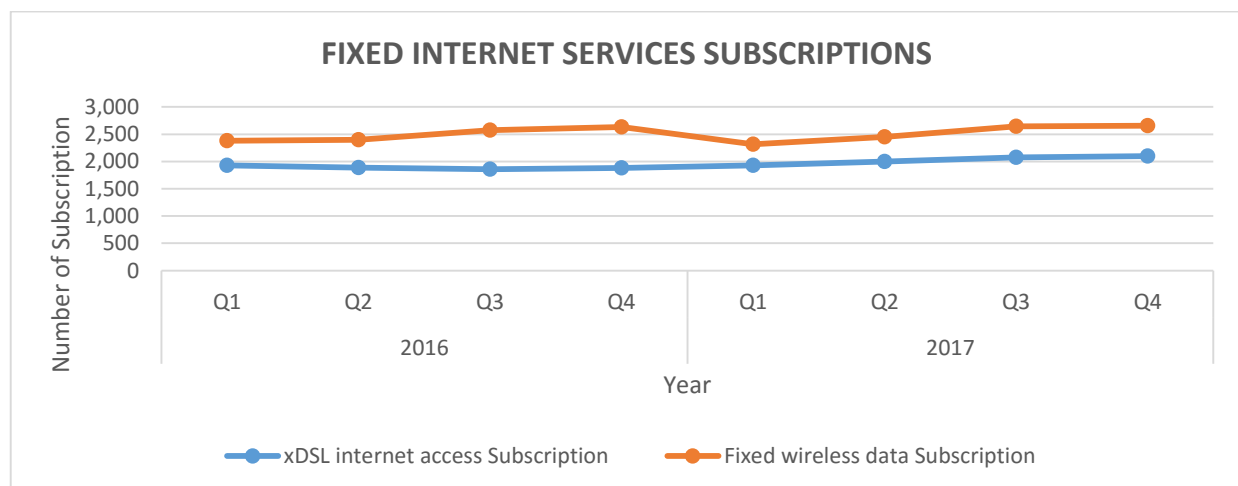


Figure 12 Quarterly Fixed Internet Services subscription

In addition, the data shows that annual fixed internet revenue continues to increase over the period since the launching of the ICN1 submarine cable and Wantok's entry into the fixed internet market. The total fixed internet revenue continues to increase and reached VUV553.5 million in 2017 at a growth of 4% compared to VUV529.7 million worth of revenue in 2016. This figure is expected to continue to increase in 2018 with rising consumer demand for the internet

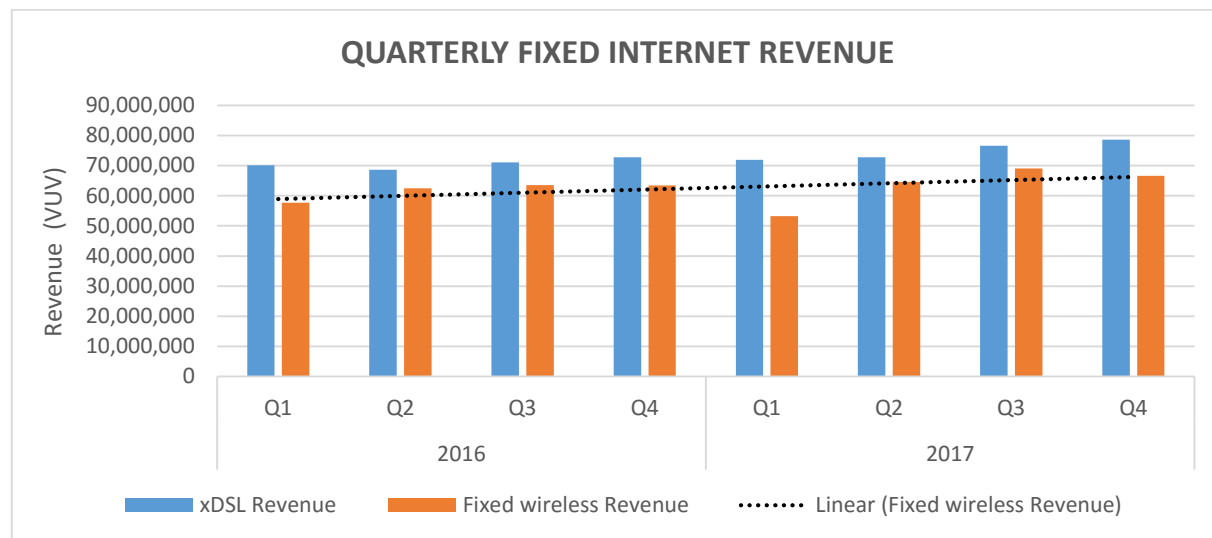


Figure 13 Quarterly Fixed Internet Revenue

Figure 13 illustrates the revenue of the fixed internet market over the quarters of 2016 to the end of 2017. The revenue of both services is steadily rising. The graph shows that a large portion of the revenue is generated by xDSL access services even though the overall subscription base is lower than fixed wireless subscription. Although xDSL revenue dropped by 2% in Q2 2016 and by 1% in Q1 2017, revenue increased during the quarters of 2017 reaching a high point of VUV78.6 million by the end of Q4 2017. This is likely the result of high demand by large corporate clients benefitting from greater reliability of service and potential internet speeds provided by technologies such as fibre optic cabling. Handful of these types of clients often pay more to ensure their business operates smoothly and effectively with fast, reliable and efficient connections. Fixed wireless revenue, on the other hand, can be seen to be fluctuating reaching its lowest point in Q1 of 2017, and then rising again through Q2 and Q3 and then falling again in Q4 of 2017. The overall fixed wireless revenue is increasing over the period of this Report as shown by the linear trend line on the graph above.

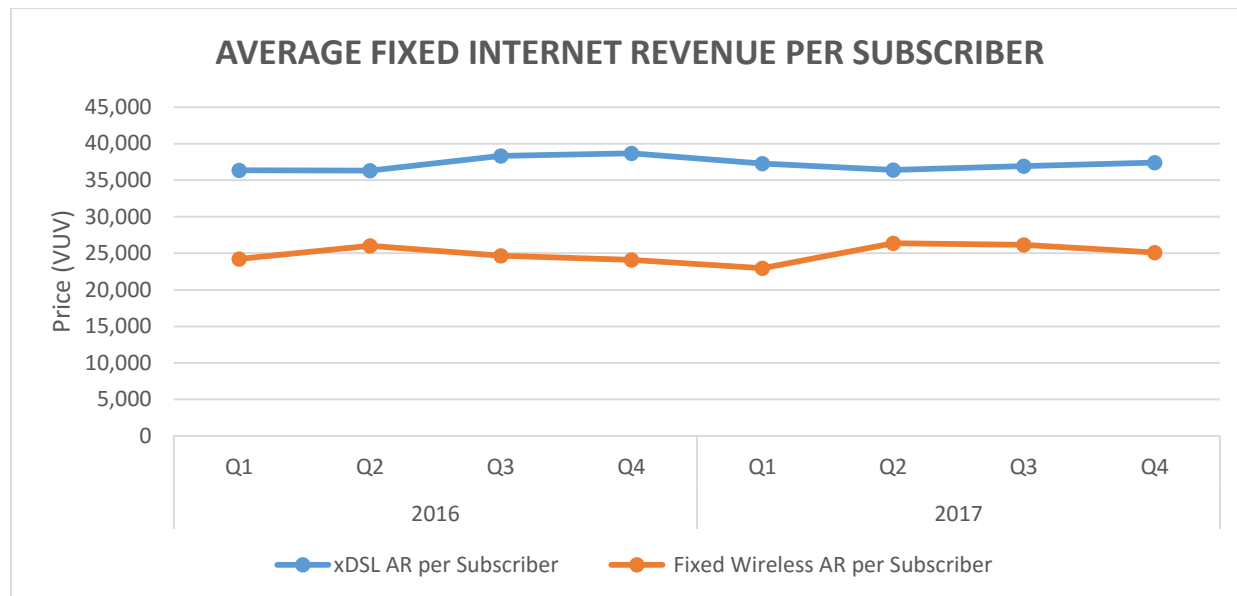


Figure 14 Average Fix internet Revenue per Subscribers

Average revenue per subscriber⁹ is shown in Figure 14. It shows that the average fixed internet revenue for both of these services fluctuated or was flat over the 2016 – 2017 period. The average xDSL revenue per subscriber remained relatively flat at VUV36, 000 to VUV38, 000, while the average fixed wireless revenue per subscriber was fluctuating, dropping from Q2 2016 until Q1 2017 when it picked up again to reach its highest point of VUV23,245 and then has remained relatively flat. The decline or lack of increase in price has resulted from the competitiveness of the market; however, the flat trend explains that fact that most internet providers tend to keep their price paid constant but have been able to increase their internet speed due to packages offered and it has also attracted more users as reliability and speed increases. The graph also shows that xDSL average revenue per subscribers is well above fixed wireless average revenue per subscribers, and this implies that most subscribers are using this service due to high speed capacity.

⁹ Calculate by dividing total revenue by total number of subscribers which is equivalent to Price paid by each subscribers.

7. Mobile Internet Services

Mobile internet services are now playing a vital role in Vanuatu's society today. With the ability of 98.8% of the population now able to have access to broadband and telecommunications services due to the successful UAP rollout and as smartphones become more affordable and with internet speeds increasing, consumers expect their mobile devices to work reliably wherever they are, whether at home, at work or on the move over mobile data technologies. Mobile internet services have increasingly become a common means for accessing internet in Vanuatu now.

There are currently four generations of technology that have been used to deliver mobile services to consumers in Vanuatu. Firstly **2G**, the first digital mobile technology used to deliver voice, text services and low-speed data services. **3G** was then launched in 2014 as the later generation of digital mobile technology which provides a download speeds of up to 5Mbps/s. This was then upgraded to **3G+** via the UAP rollout. That technology supports mobile voice and text and data services provided by both Digicel and TVL. **4G** was then launched in 2016 as the latest generation of mobile technology and provides typical download speeds of up to 10Mbps. 4G mobile services are operated by Digicel and TVL while Wantok provides a fixed 4G service. There has been a significant upgrade of the mobile networks by TVL and Digicel for the 4G to also support voice services.

Mobile coverage has increased to account for 98.8% of the total population as operators increased their deployment mobile technologies in accordance with the UAP. The upgrade to 3G+ and 4G technologies has provided access a higher level of voice and data services for the people of Vanuatu making communication between them easier together with the ability for them to utilize more enhanced services.

7.1. Mobile Data Subscriptions

Mobile data subscriptions equates to the total number of subscribers who have accessed the internet through mobile data technologies such as 2G, 3G, 3G+ and 4G technologies. Such access can be via mobile phones, tablets or through dedicated data-only connections such as a dongle or router which utilizes a mobile SIM card to connect to a mobile data network.

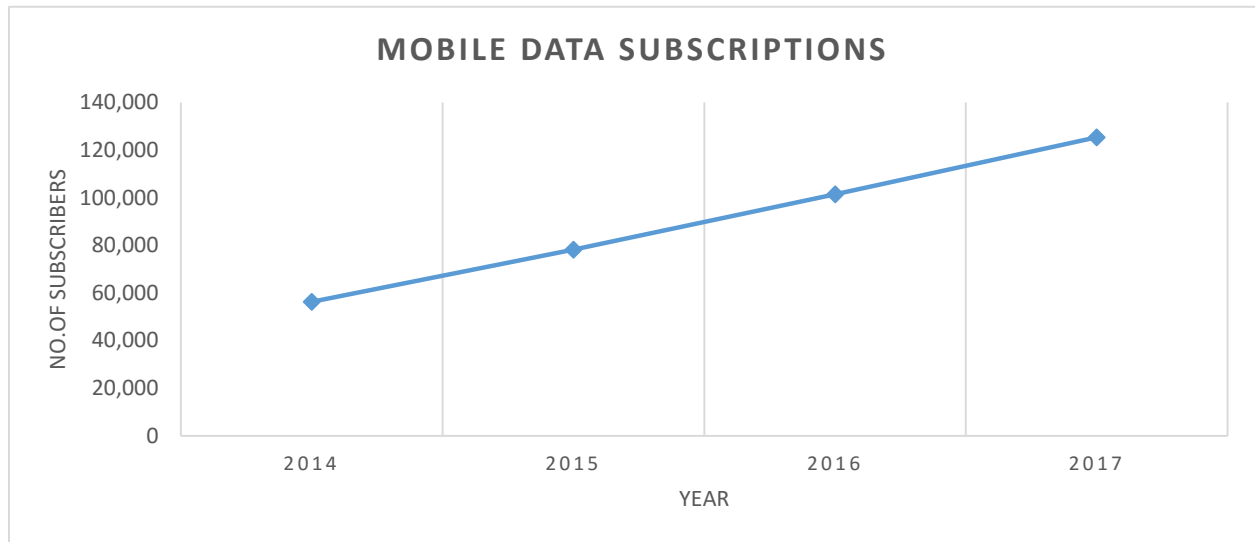


Figure 15 Total Mobile Data Subscribers 2014 to 2017

Figure 15 shows mobile data subscriptions from 2014 to the end of 2017. The graph illustrates a significant increase in the mobile broadband subscribers by 24% from around 101,438 subscribers in 2016 growing to over 125,366 subscribers in 2017. The subscription base is expected to continue rising in 2018. The healthy growth of subscribers has been boosted by the ongoing upgrade of mobile networks by the mobile operators across Vanuatu to support 3G+ or 4G technologies under the UAP. This has attracted an increased subscriber base along with consumer friendly promotional bundles providing cheaper and higher speed capacity allowing them to surf on internet more comfortably and conveniently. This figure is anticipated to increase over the years as mobile internet use is becoming increasingly popular across the islands of Vanuatu.

7.2. Average Price of Mobile Data

Competitiveness in the telecommunication market has a significant effect on the pricing of mobile internet services. This can be explained and shown by the strong growth of mobile data subscriptions which have been stimulated by low data pricing.

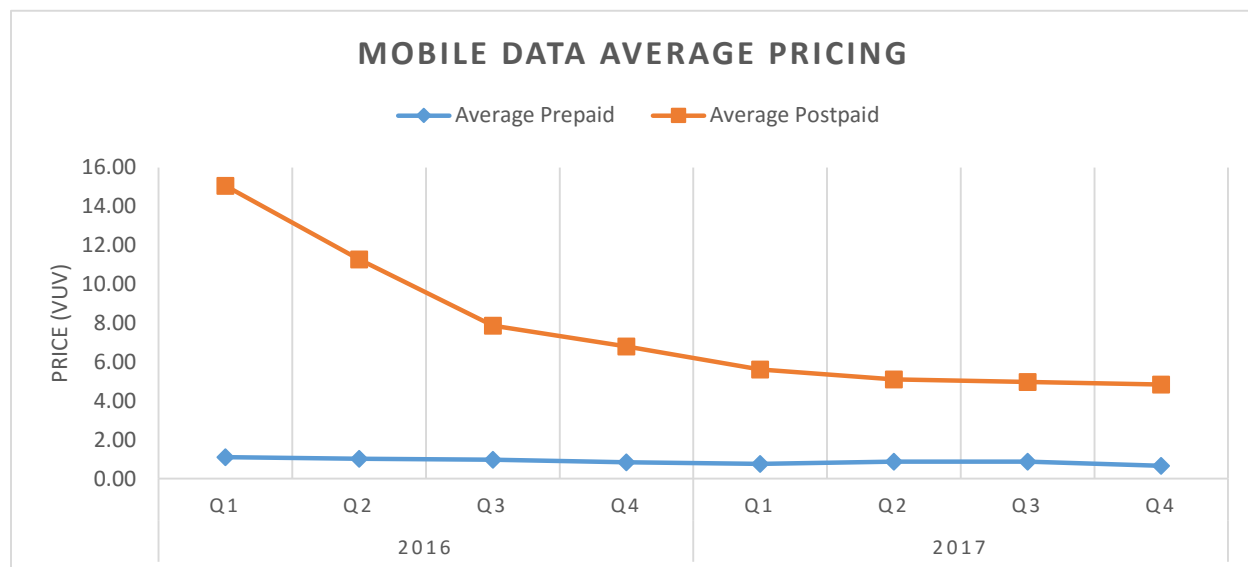


Figure 16 Average Prepaid and Postpaid Mobile Data Pricing

Figure 16 shows the trend of average mobile data pricing for both prepaid and postpaid packages. The average price for both services continue to fall, with the prepaid pricing falling to as low as 0.66VT/MB and 4.85VT/MB for the postpaid price in 2017. The drop in mobile data price encourages more mobile data subscribers as price competition increases and due to further promotional bundles or data plans continuously offered by TVL and Digicel.

The mobile data pricing is calculated per megabyte rather than looking at the total bundle rate, as it is easier to compare pricing across a range of time periods when the bundle sizes may have changed throughout the period.

7.3. Mobile Data Traffic

As demand for mobile data services grow, the sector naturally experiences a significant expansion in the subscription base, and this has led to stimulation and a strong growth of mobile data traffic in 2017. Accessing the internet especially on mobile phones has become a popular means of communication as OTT services become more and more convenient for consumers and as internet speeds increase, while the price per megabit drops have stimulated growth of mobile data traffic.

Available data shows that the annual mobile data traffic has risen from 272 Terabytes¹⁰ (TB) in 2016 to reach 663TB in 2017. This is expected to increase in 2018 with more consumer take up and use of data.

¹⁰ 1 terabyte equals 1 million megabytes

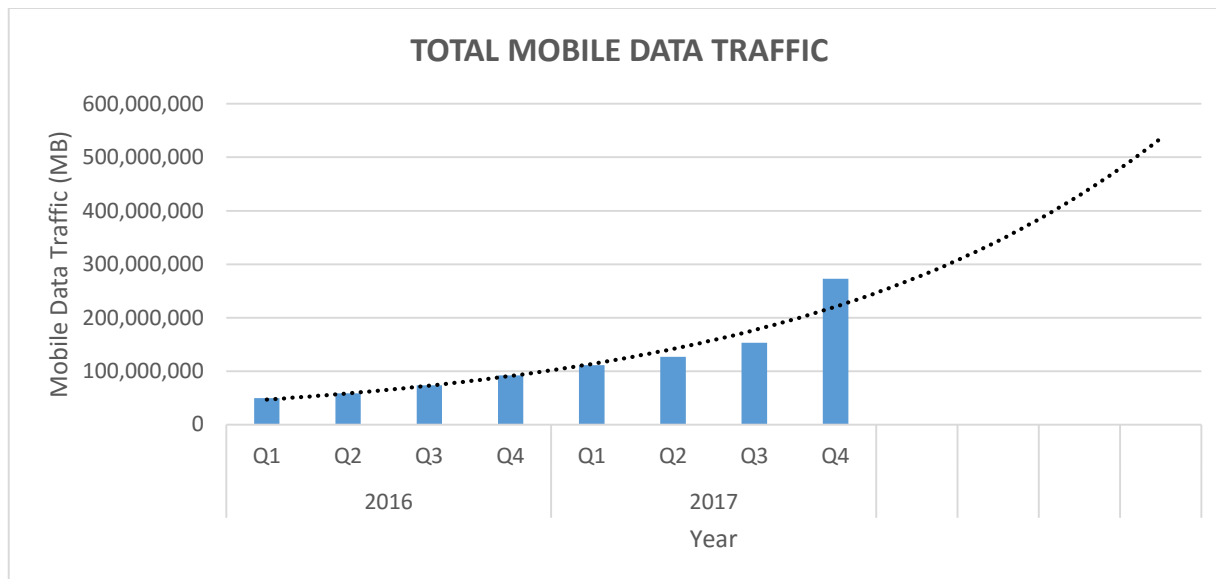


Figure 17 Total Quarterly Mobile Data Traffic

Figure 17 illustrates the actual mobile data traffic between 2016 and 2017 and shows a significantly upward trend. The overall trend has been increasing over each quarter. Q1 of 2016 recorded 49TB of mobile data which then rose to a peak of 272TB in 2017, a growth rate by 78%. The rising upward trend of mobile data traffic is due to the increase in data demand by consumers, stimulating an ongoing growth in the number of mobile data subscribers. Another important reason causing the upsurge of mobile data is the expansion and continuous investment in 3G, 3G+ and 4G data networks and, also, implementation of the Government's UAP; which contributes to the rise of data volume.

The new UAP sites have provided increased and improved avenue for users, especially in remote areas outside of Port Vila and Luganville, to access internet services; where they previously had a lack service availability due to high access costs or no service at all. These benefits are vital for such consumers as it eases their ability to, and improves their communication availability, as well as providing entertainment and valuable educational and research potential; especially for teachers and students. Thus, this Government's UAP initiative has contributed to the increase in the volume of mobile data traffic.

However one thing that would boost data usage further is local online content available for both mobile and fixed users, given there is limited availability of such content, curtailing use and access to entertainment sites. More content development and services to match the data available and make it more relevant to the population, as the exponential line in Figure 17 forecasting the growth of mobile data to reach over 550 TB in Q4 2018, would provide direct benefit to consumers and operators alike. Even though exponential line shows future data if growth proceeds as is, it is likely to be steeper than this as mobile data usage is rapid increasing.

7.4. Mobile Data Revenue VS Mobile Call Revenue

Revenue from mobile calls has been the dominant component of the overall telecommunications market revenue. However, as data demand and use grows TRBR has observed a shift from calls to data. This has been facilitated by consumer use of OTT services which are seen to be convenient to use and are effectively seen as “free” by the consumer. With increasing usage of these OTT services provided by the likes of Facebook, WhatsApp, Messenger, IMO, WeChat and many more, mobile calls are being substituted by these OTT services that rely on the internet and/or mobile data services to provide their communication services to the end consumer. However, even if the OTT voice call is perceived by the consumer as “free”, a consumer needs to be aware that they are still required to purchase data in order for the service to work; and that, therefore, substitutes voice call minutes for bytes of data.

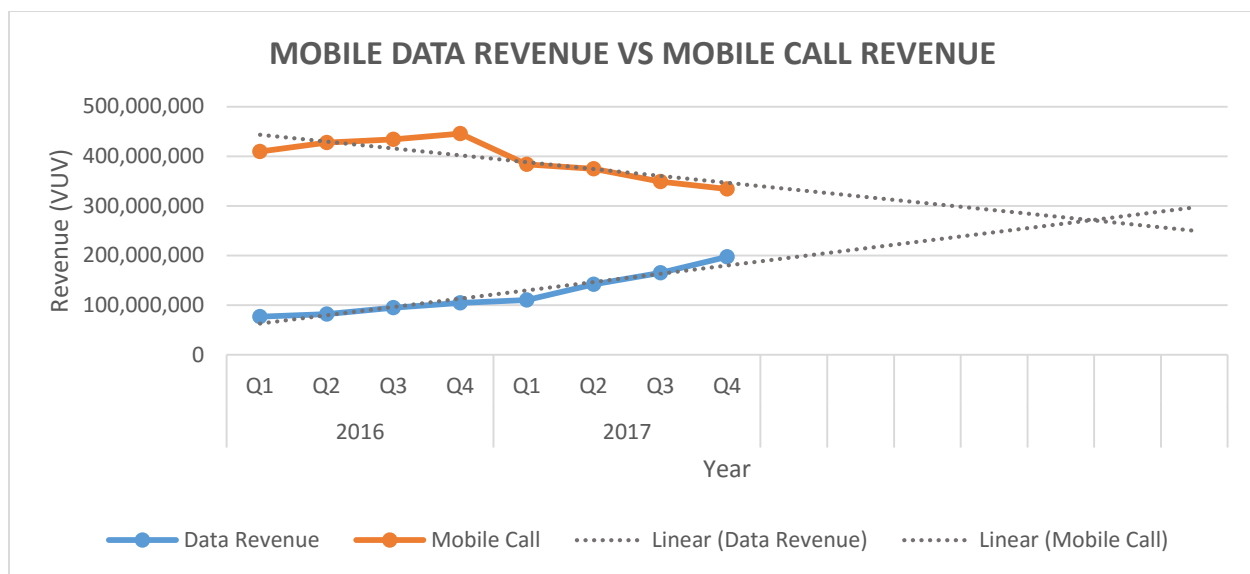


Figure 18 Mobile Data Revenue VS Mobile Call Revenue

TRBR compared the revenues for both mobile data and mobile calls with the result shown in Figure 18, illustrating the trend of both revenue lines. Mobile call revenue has effectively fallen since Q1 of 2017. On the other hand, mobile data revenue has steadily grown since Q4 2016; starting slowly then increasing significantly. This indicates that users are now substituting mobile calls for mobile data services, no doubt helped by the competitive prices for data bundles.

This substitution will undoubtedly continue in 2018. It can be expected that there will be a cross over in the revenue streams and that this will take place during 2018 (likely Q4 2018); with mobile data then being the predominant revenue driver for both operators. Development of local content will also assist an increase in data usage as the population moves further towards a data centric environment.

8. SMS Text Messaging

SMS denotes a 'Short Messaging Service' and is commonly referred to as Text Messaging. The telecom sector is continuing to experience a decline in SMS usage, but for the year 2017 even though SMS messages may have fallen the annual SMS revenue grew from VUV116.7 million in 2016 to hit VUV118.5 million at a growth rate of 1.5%.

OTT services have impacted on the use and growth of the SMS service as data collected by TRBR shows SMS traffic falling in 2017 and this can be expected to continue to decline in the coming years. Total SMS messages sent has declined by 4% recording only 88,962,571 SMS in 2017 compared to 93,467,210 SMS recorded in 2016.

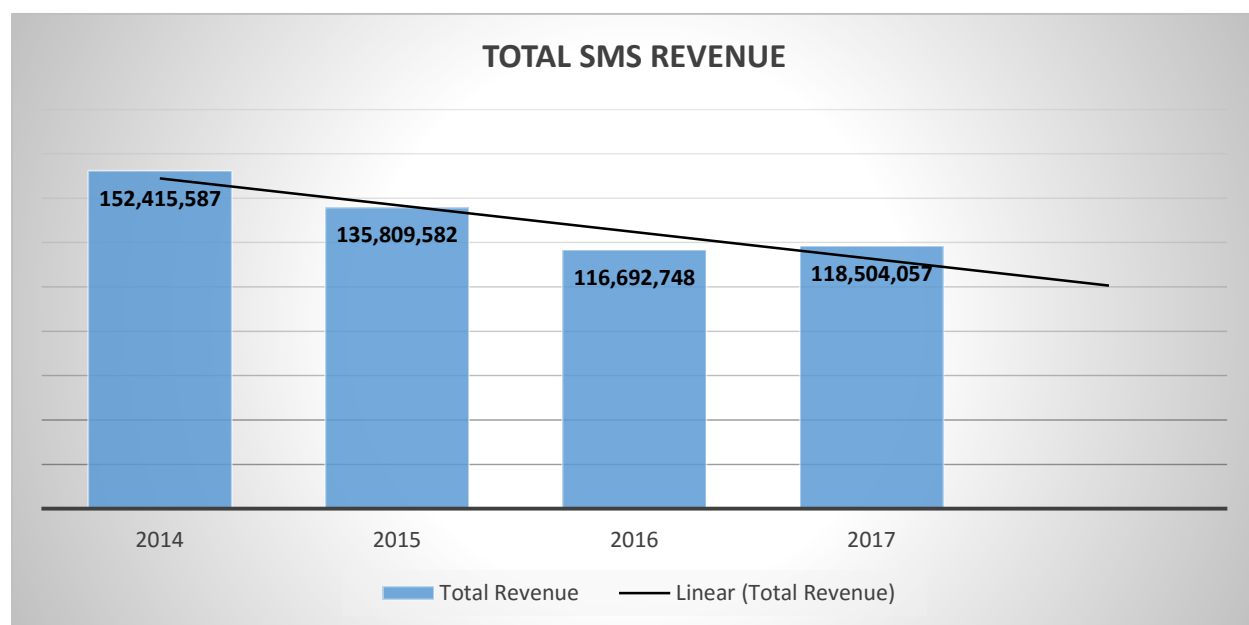


Figure 19 Annual Total SMS Revenue

Figure 19 shows the SMS revenue from 2014 to 2017 and projected in to 2018. Revenue fell to VUV116.7 million in 2016, down by 14%, but it picked up again to hit VUV118.5 million at a growth rate of 1.5% in the following year 2017. This is due to increase in the underlying cost. This cost is hidden in bundles where you get less value in SMS and thus overall cost increase. Despite SMS revenue increasing in 2017, the overall trend is seen to be declining as it is instant messaging that users prefer over SMS.

Though the anticipation is that future SMS revenue will continue to drop in the future due to the use of OTT services, the diverse messaging market still indicates a case for continued use of SMS services for some considerable time to come, as it will be able to play a vital role in the future as a reliable means of communication that helps enterprises such as corporate businesses, especially, to engage with their customers, employees, business partners or the general public, and it is still used by many consumers.

8.1. Average SMS Pricing

The average advertised PAYG SMS price still remains at 10VT per SMS as both service providers continue to remain competitive on promotions and bundles to retain users.

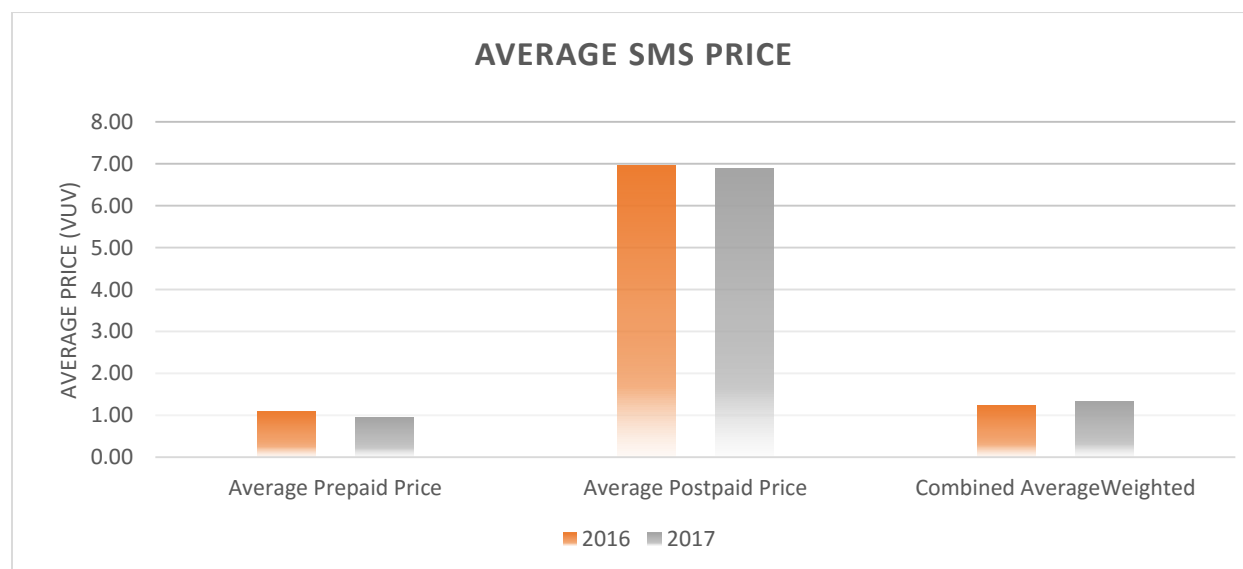


Figure 20 Average SMS Price

Figure 20 shows the average prepaid price dropping in 2017 as the average prepaid price has fallen from 1.09VT in 2016 to 0.96VT per SMS 2017. The reason as to why Vanuatu has experienced a drop in the average prepaid price is because SMS messaging is slowing starting to be substituted by OTT services through data usage, and users seem to no longer consider SMS texting as their primary means of communication. These decisions by a consumers have, consequently, led to significant decline in the SMS volume, with the statistics showing SMS volume dropping by 5% to reach only 88.9 million SMS in 2017 compared to 93.5 million SMS in 2016. The drop in SMS volume has meant that revenue is also dropping causing the average price to fall. The average postpaid price has also dropped to 6.89VT per SMS in 2017 compared to 6.97VT in 2016.

8.2. On-net and Off-net SMS /Average Revenue per Users

A large proportion of SMS messaging has always been generated through on-net services. However, increases in demand for OTT services is affecting SMS returns. Available data shows the total SMS traffic has dropped with the major proportion of this reduction accounted for by on-net services, especially prepaid plans. The On-net prepaid SMS volume has fallen by 6% recording only 80.3 million SMS in 2017 compared to 85.7 million in 2016. Prepaid off-net SMS volume also fell from VUV5.2 million in 2016 to VUV5.1 million in 2017. Postpaid SMS volume on the other hand, both on-net and off-net plans have grown by 39% and 37% respectively in 2017.

Promotions and bundle services continuously being offered by the service providers tend to focus more on on-net SMS services, thus resulting in cheaper pricing compared to off-net pricing. For example, Digicel in 2017 offered a 1-day plan of 500 SMS¹¹ for only 100VT, and a WAO SMS¹² plan offered by TVL at 60VT for 60 SMS valid for 1-day. On-net SMS volume can be seen to be declining reaching only 82.7 million SMS in 2017 compared to 87.5 million SMS in 2016. It is reasonable to assume that this has occurred due to the increasing popularity of OTT services as the subsequent large growth in mobile data in Vanuatu; particularly since OTT services provide range of additional features and functionality that allows users to share other content such as pictures and videos.

¹¹ Digicel SMS Pass. Get 500 SMS valid for 24 hours for 100VT

¹² TVL Daily WAO SMS Pack. Get 60SMS for 60VT valid for 24 hours

9. Fixed Telephony

9.1. Fixed Telephony Subscriptions

Fixed telephone subscriptions refers to the total of active number of analogue fixed telephone lines and Voice over IP (VoIP) subscriptions.

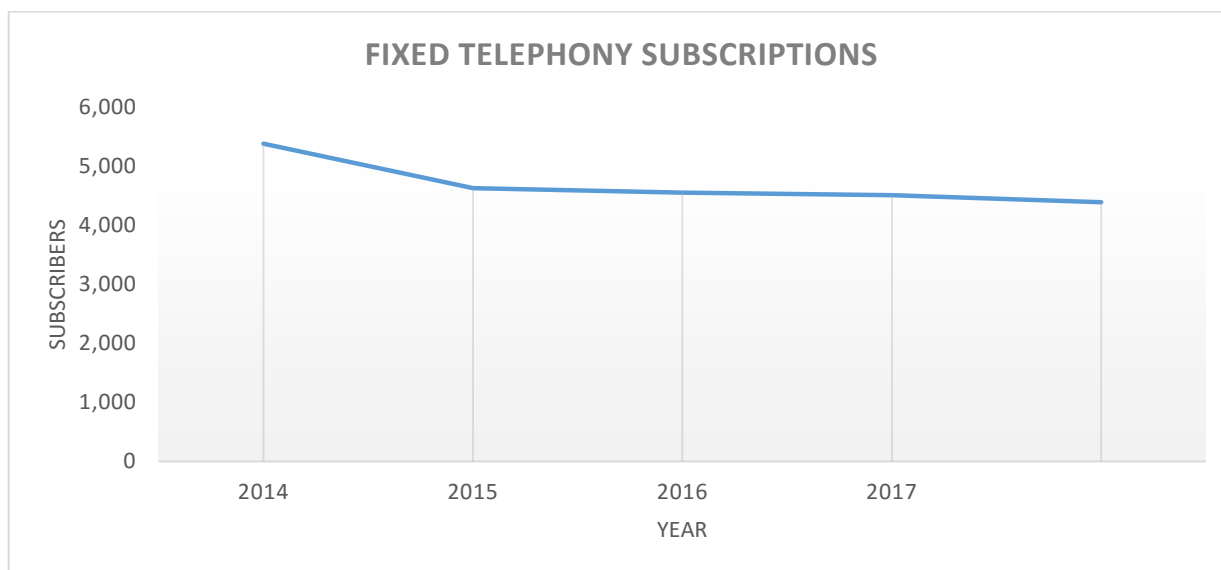


Figure 21 Fixed Telephony Subscriptions

Figure 21 shows the number of fixed telephone subscriptions in 2017, and a projection in to 2018. Following on from previous years, the fixed telephony subscriptions trend can be seen to continue to fall; now at a rate of around 1% in 2017 recorded 4,511 subscribers and the figure has gradually declined from 4,555 subscribers in 2016.

The rationale for this trend reflects preferences and demand from consumers, with mobile services now becoming more affordable and more convenient, as well as offering mobility in lieu of a single (fixed) point of contact. Thus, the high demand for and use of mobile services has resulted in consumers being diverted away from using fixed telephony; reflecting the continued downward trend shown for a fixed service.

This trend follows the world-wide trend and is expected to continue in to the future as consumers continue to substitute fixed telephone services for mobile services. Fixed telephony, although less popular, still plays a vital role in the business and corporate sectors and for organizations, as it provides a consistent and well known – through the number - point of contact for stakeholders to contact.

9.2. Fixed Call Revenue

In line with the reduced number of subscribers, the overall annual fixed call revenue declined in 2017. Data shows the total fixed telephony revenue has dropped by 8% in 2017 to VUV282.9 million compared to VUV308 million in 2016.

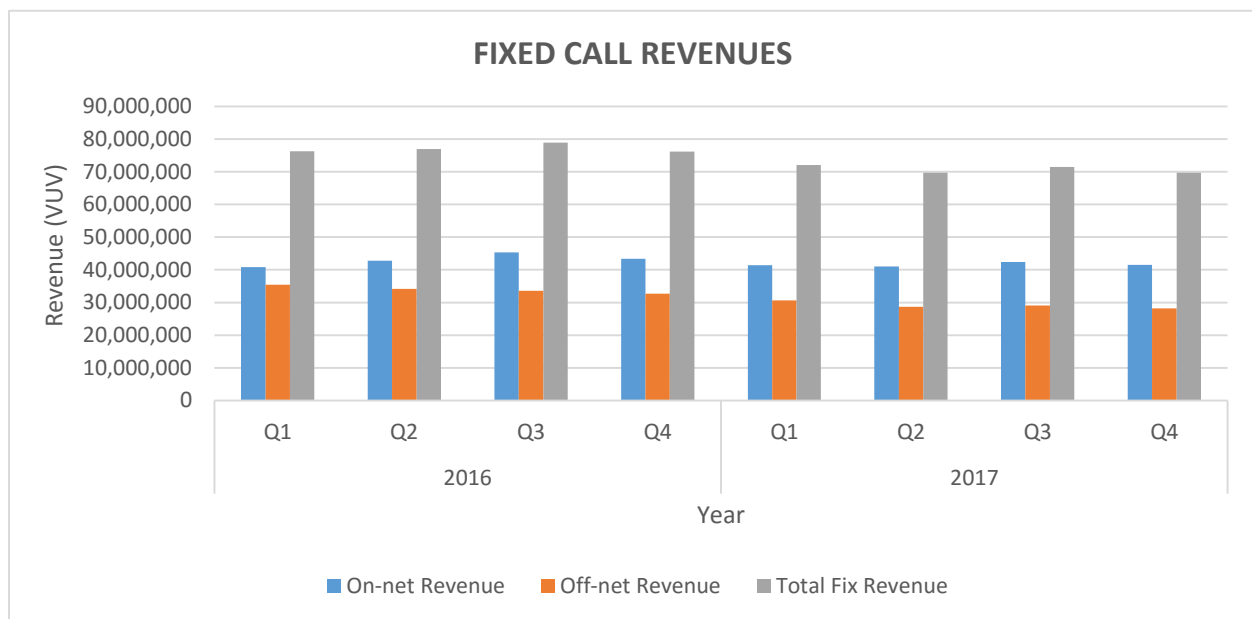


Figure 22 Fixed Call Revenue by Call Destination

Figure 22 clearly illustrates the revenue trend showing the quarterly revenue trend from Q1 2016 to Q4 2017. The graphs depict on-net, off-net and total fixed revenue and shows that revenue remains relatively flat but slowly falling overall during this period. Total fixed revenue reached its peak of VUV78.9 million in Q3 2016, slowly falling to record its lowest point in Q2 2017 at VUV69.7million. The on-net revenue reached a peak of VUV45.4 million in Q3 2016 and steadily declines until Q4 2017 which recorded VUV41.5 million worth of revenue. The off-net revenue trend is slowly and steadily declining recording its lowest point in Q4 2017 of VUV28.2 million.

10. International Calling

10.1. International Outbound Call Traffic

Overall annual international call traffic has declined over the period of this report. Total international call traffic dropped by 19% in 2016 recording 3.5 million minutes, and later fell further to reach 3 million minutes in 2017; declining at a rate of 12%.

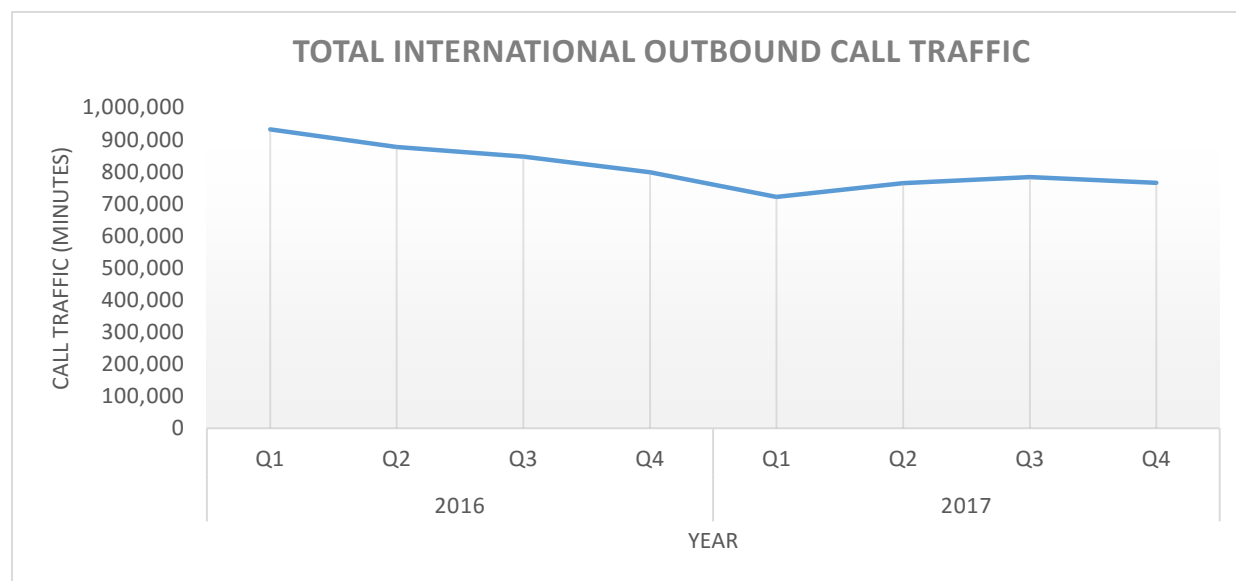


Figure 23 International Outbound Call Traffic

Figure 23 illustrates international outbound call traffic between 2016 and 2017. The trend shows a downward slope from a highest point of 931,987 minutes in Q1 2016 to 765,226 minutes in Q4 2016. The declining volume of international calls clearly indicates that consumers are turning away from this communication medium due to the much higher cost associated with this service, compared with other alternatives such as OTT services. This, again, contributes to the strong growth of mobile data traffic and revenue as these OTT services are a cheaper means of communicating overseas.

The graph also shows a rise in call traffic over the quarters of 2017. The underlying rationale for this is highly likely due to contact with seasonal workers overseas, to enable families and friends back at home to communicate with them.

10.2. International Outbound Call Revenue

Total annual International call revenue decreased for the period of this report. Revenue dropped by 16% to VUV192.5 million in 2016 and then fell further to VUV156.7 million in 2017 at a declining rate of 19%. The trend is shown in the graph below.

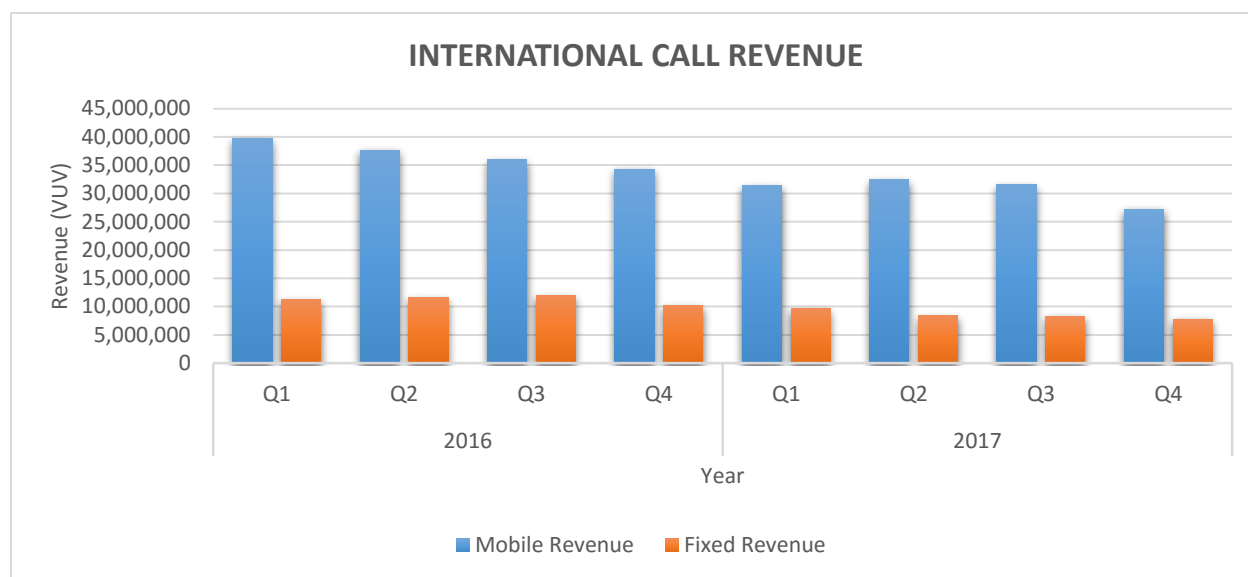


Figure 24 International Outbound Call Revenue by Type of Call

Figure 24 illustrates the international outbound revenue by call type between Q1 2016 and Q4 2017. The graph shows that largest proportion of international outbound revenue is generated from mobile international calls with fixed international call revenue now below the VUV11 million 2016 figure. The trend for both services can be seen to be falling as a result of declining international outbound call minutes due to customer choice and use of OTT services.

There was, however, an increase in international outbound call minutes over quarters 2 and 3 of 2017, as shown in Figure 22 and explained in Section 12.1, and that reflected a mobile revenue increase in those quarters.

International revenue through fixed services has continued to fall steadily but it remains an important service for some businesses, corporates, and Government sectors to communicate overseas.

10.3. International Inbound Roaming

International inbound roaming increased over the period of this report. Data shows that the number of those roaming inbound from overseas increased significantly by 38% in 2017, with; recording 37,593 subscribers compared to 27,253 in 2016.

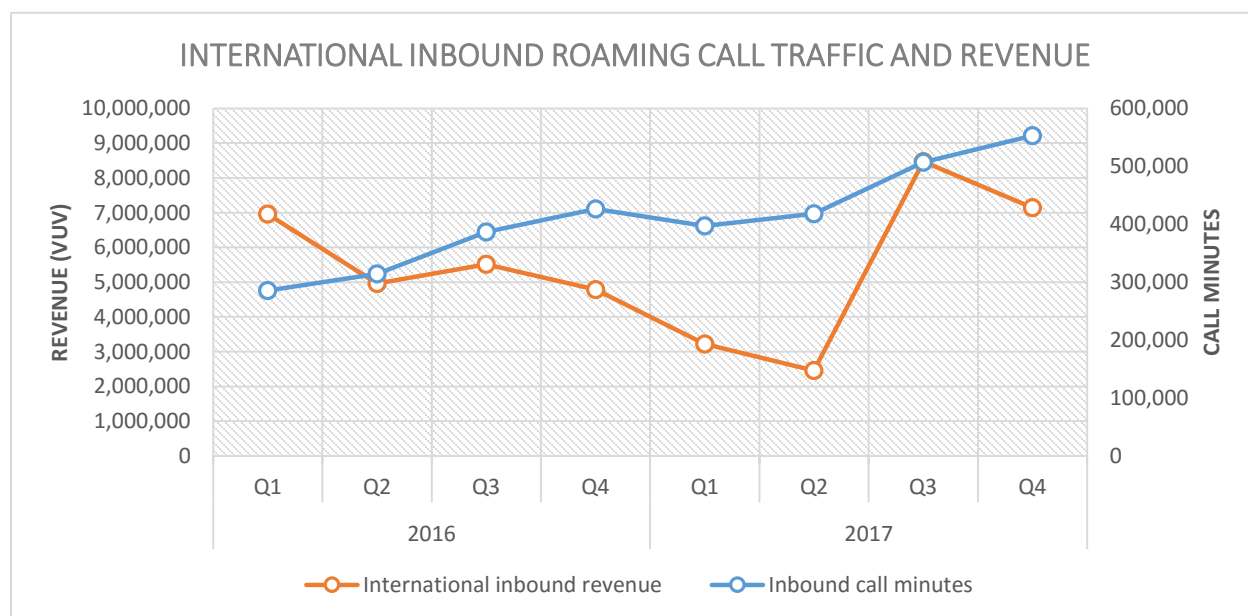


Figure 25 International Inbound Roaming Call Traffic and Revenue

Figure 25 shows the international inbound roaming call traffic and revenue from 2016 to 2017. The inbound roaming call minute trend can be seen to be growing steadily with the minutes increasing from 285,753 minutes in Q1 2016 to 552,971 minutes in Q4 2017 (a total of 1,413,281 minutes in 2016 and 1,875,258 minutes in 2017). The steady increase in the international inbound roaming call traffic reflects the growing number of visitors entering Vanuatu as tourists or for and business purposes, however, the strong growth of call traffic seen for the last two quarters of 2017 has been driven by increase in visitors coming into the country as participants of the mini games which has boosted this growth.

Accordingly, international inbound roaming call revenue and the trend is rising as well, after hitting a low point in Q2 2017 of VUV2.5 million it then peaked at VUV8.5 million in Q3 2017 then dropped to VUV7.1 million in the last quarter of 2017.

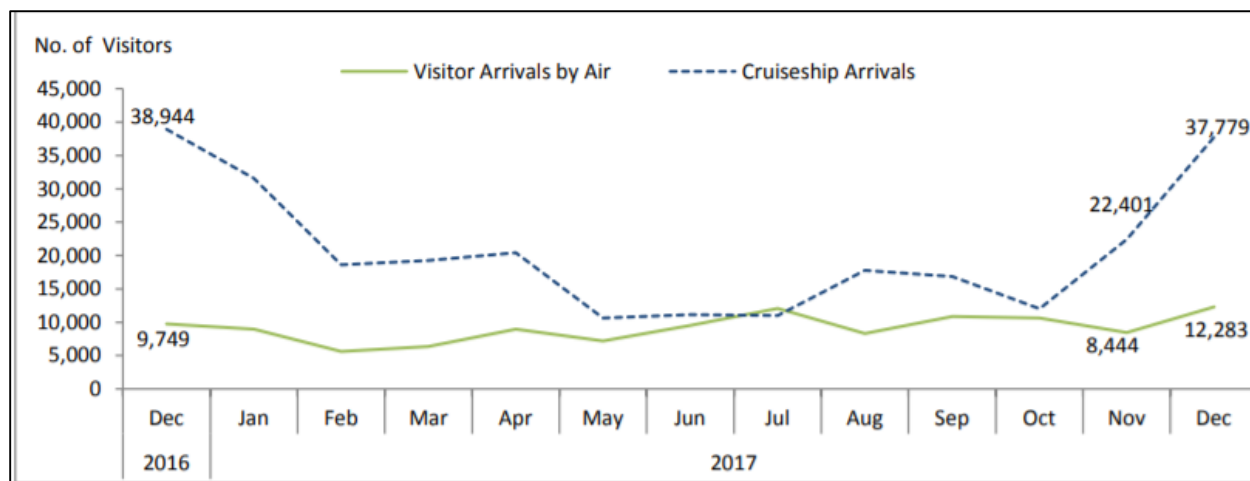


Figure 26 Visitors Statistics from Vanuatu National Statistics Office (VNSO)¹³

A contributing factor to the drop of international inbound revenue shown in Figure 25 is driven by a lower number of visitors arriving during that period as the VNSO data in Figure 26 clearly confirms the drop in number of visitors since December 2016 and started rising again in October 2017. This is especially for the number of visitors arriving in Vanuatu by cruise ship which correlates with the decline in the international inbound roaming revenue. Hence, international inbound roaming revenue will fluctuate with and depends on the number of visitors; especially tourists entering Vanuatu.

¹³ <https://vnso.gov.vu/index.php/economic-statistics/tourism-news>

11. Conclusion

The transformation of technologies along with digital incentives have helped to promote the pickup, adaption and use of telecommunications/ICT's by consumers and have increased the competitive advantage for the industry while empowering the citizens. Telecommunications plays an important role as the backbone of and driver for all other sectors in Vanuatu's economy and with ongoing growth in data revenue, the outlook for the Vanuatu's telecom sector remains positive.

Telecommunications is one of the fastest growing industry in Vanuatu and total market revenue has shown healthy growth since liberalization. This competitive environment stimulates increase in demand of services as the prices are driven down boosting the total industry's revenue to exceed VUV5.3 billion in 2017.

The rising demand for OTT services and the active and increasing use of social media, such as Facebook or YouTube, is stimulating explosive growth in data subscribers and revenue, while on other the other hand, voice and SMS revenue is declining. Data volume has been rapidly increasing reflecting consumer's choice of directing their preference to OTT services and this has been accommodated by technological transformation such as mobile network upgrades to 3G, 3G+ and 4G with increased data speeds. With these technological and market changes, Vanuatu's telecommunication sector is now moving towards becoming more data centric and the statistics show that mobile data revenue is closing in to overtake mobile call and SMS messaging.

As digitization occurs and increases, it requires agility, innovation and an emphasis by industry on customer satisfaction, as well as customer choice.

While mobile data volume is growing, the development of appropriate and meaningful internet content will also drive uptake and increased revenue for the telecommunication industry.