



CRAN

Communications Regulatory Authority of Namibia

Telecommunication Sector Performance Review for 2016

August 2017

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Introduction

The Telecommunication Sector Performance Review assesses developments in the telecommunication sectors for 2016. The review takes into account the financial health and performance of Namibian operators; consumer price developments in the telecommunications sector; changes in the competitive landscape; and general trends for 2016.

Trends

Deloitte (2016) predicted that a quarter of smartphone users in developed markets will not make any traditional voice calls in a given week in 2016. Instead, calls are made with Over the top services (OTTs) like Skype, WhatsApp and FaceTime, and texts are sent with messaging applications such as Facebook Messenger and WhatsApp. Christian (2017) marked 2015 as the turning point for international voice growth, which turned negative for the first time since the Great Depression. He argues that the decline is a permanent structural shift due to the mass adoption of OTTs.

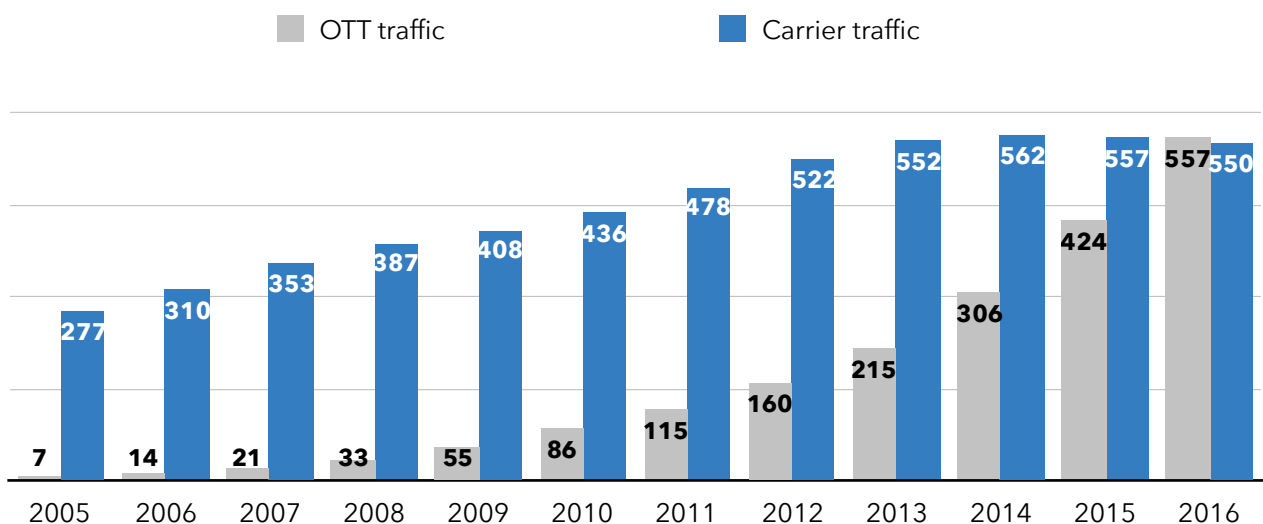


Figure 1: International traffic in billion minutes (Source Telegeography)¹

Telegeography reported that, in terms of traffic, OTTs overtook globally regular carrier traffic in 2016 for the first time (Figure 1). International voice traffic will continue declining in 2017 and 2018.

OTTs will replace regular voice and messaging services in the near future. Figure 2 depicts the transition from traditional to data-access-only services, which rely on OTTs for communication. The x-axis is an average period of time, because some countries may reach a phase sooner than others, and some countries will lag behind these trends for a longer period of time, depending on the level of competition within the ICT sector of each country.

¹ Telegeography, <https://www.telegeography.com/research-services/telegeography-report-database/index.html>

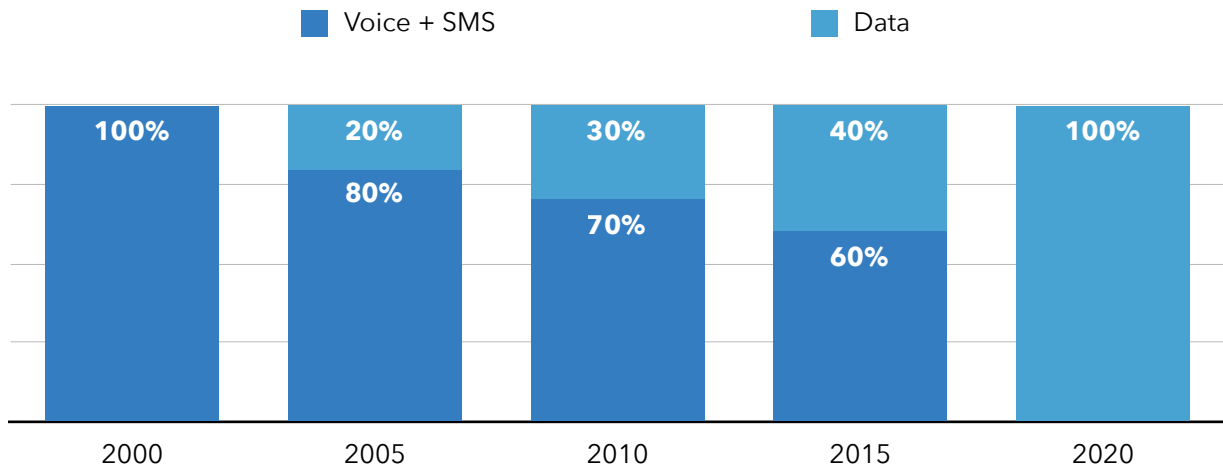


Figure 2: Trends towards “Access” only business models (source: authors’ own graphic)

The general trend is a shift away from analog voice and SMS revenues towards data revenues, driven by OTT services, such as social media and other IP-based services, which will be increasingly used for voice and message communication. The trend described in Figure 4 depends on smartphone penetration and 3G+ network coverage. The migration to a data-only business model will take longer for countries that have little 3G and 4G coverage and low smart phone penetration.

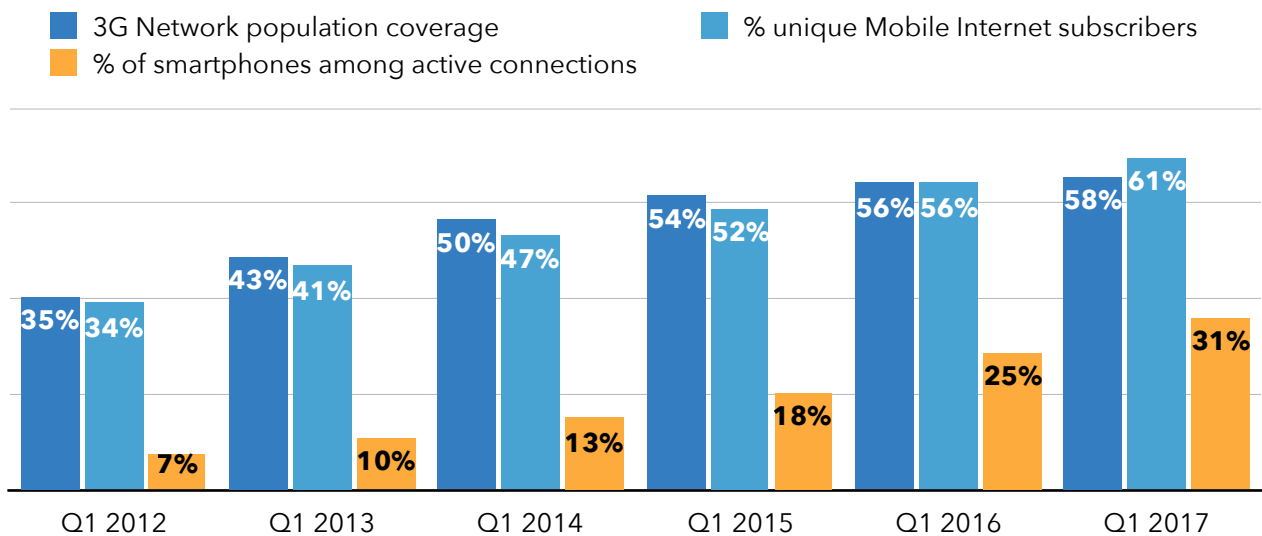


Figure 3: Next business generation model indicators for Africa (Source GSMA Intelligence)

Figure 3 shows that mobile Internet subscribers track 3G network coverage in Africa and even slightly exceed it, which is possible since EDGE (2.5G) networks are enough for basic mobile Internet. Smartphone penetration among active users is slower to catch up with network coverage mostly due to the cost of smartphone handsets. In Africa, a third of active connections are using a smartphone. The actual number of unique users is thus higher, since there are many more active SIM cards in circulation than there are unique subscribers. The number of duplicated SIM cards is likely to be higher than the number of duplicated smartphones.

Mobile operators will eventually become “access” providers,² distinguishing their products simply by speed and quality of service, and competing with other forms of access, such as Public WiFi and connectivity in places of work, study and home.

As OTTs become the dominant form of communication, billing and marketing functions rapidly simplify - one MB of data is easier to bill, as opposed to voice, data and SMS billing, which is dependent on destination and time of day.

Operating costs can be lessened, by reducing both the number of retail locations and commissions to agents, since there would only be one product to sell, namely data.³ A significant number of mobile operators will have transitioned to the Access + OTT Phase 6 by 2020.

Table 1: Transition to a next generation business model		
Item	Traditional Voice, SMS and Data business Model	Next Generation Business Model
Services	Voice, SMS, Data	Data
Billing	Access and usage billing: Detailed billing systems for voice and SMS that can distinguish between off-net / on-net, peak / off-peak	Simple access billing
Traffic Monitoring	Detailed traffic monitoring as part of the billing system	Usage monitoring limited to data use
Postpaid subscribers	Detailed vetting to reduce risk or revenue loss and expenses that arise from call termination and subsidised handsets	<ul style="list-style-type: none"> • Postpaid risk limited to revenue of one billing cycle • No external expense risks • Prepaid and postpaid do not need to be distinguished by pricing • Postpaid may be extended without significant vetting

Table 1 compares the traditional business model with the next generation business model.

² The term “Dumb pipe” has sent shockwaves down the spines of fixed line engineers for many years. Mobile data access would provide better categories than a smart utility, since the network provides location and QoS data, among many other features in the access model.

³ JIO, an Indian operator, launched services based on this model in September 2016. It only offers mobile data services at different speeds and does not charge for voice or SMS, which is left to OTTs. See eg: <http://in.reuters.com/article/reliance-telecoms-jio-idINKCN11611V>

Financial Performance of Telecommunication Sector

Namibia only has two national telecommunications operators which are majority or entirely owned by the state, the same as before opening the market in 2006. While smaller operators gain market share in terms of assets and revenues, the sector remains highly concentrated with MTC and Telecom Namibia controlling 93% of the assets and 88% of the revenues of all licensees.

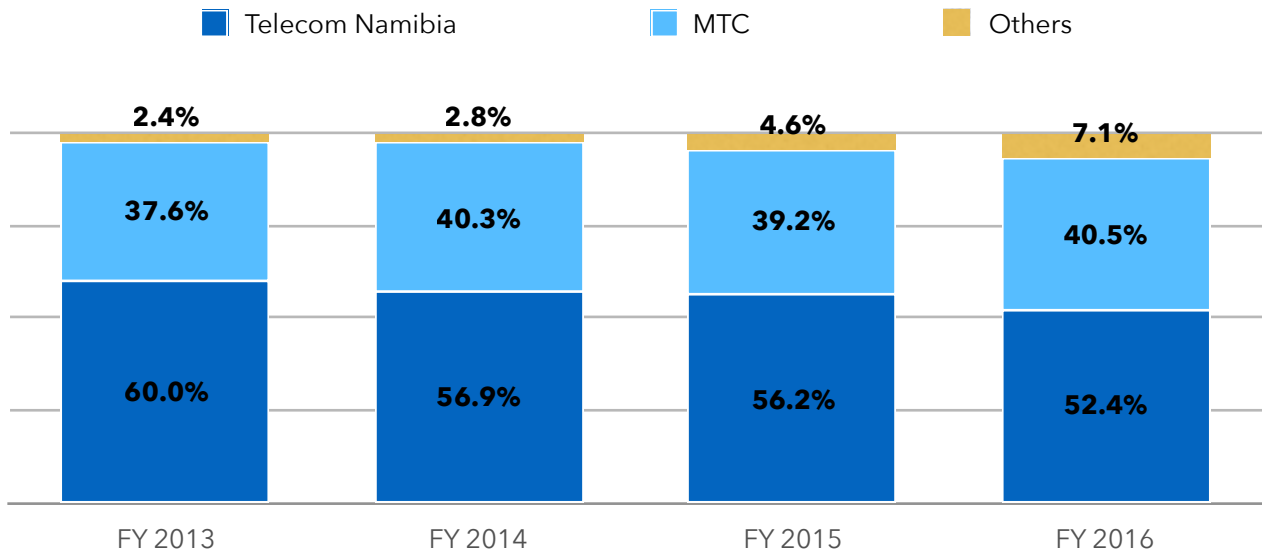


Figure 4: Assets as market shares for the financial years ending in 2013- 2016 (company)

While smaller licensees have increased their share in assets and revenues the high market concentration raises the concern of insufficient competition and higher consumer prices and lower quality of service as a result. This in particular because MTC is dominant for mobile telephony and Telecom Namibia for fixed-lines and national data connectivity. The smaller licensees mainly resell Telecom Namibia’s infrastructure and thus are only competing with Telecom Namibia on retail level, not on wholesale level.

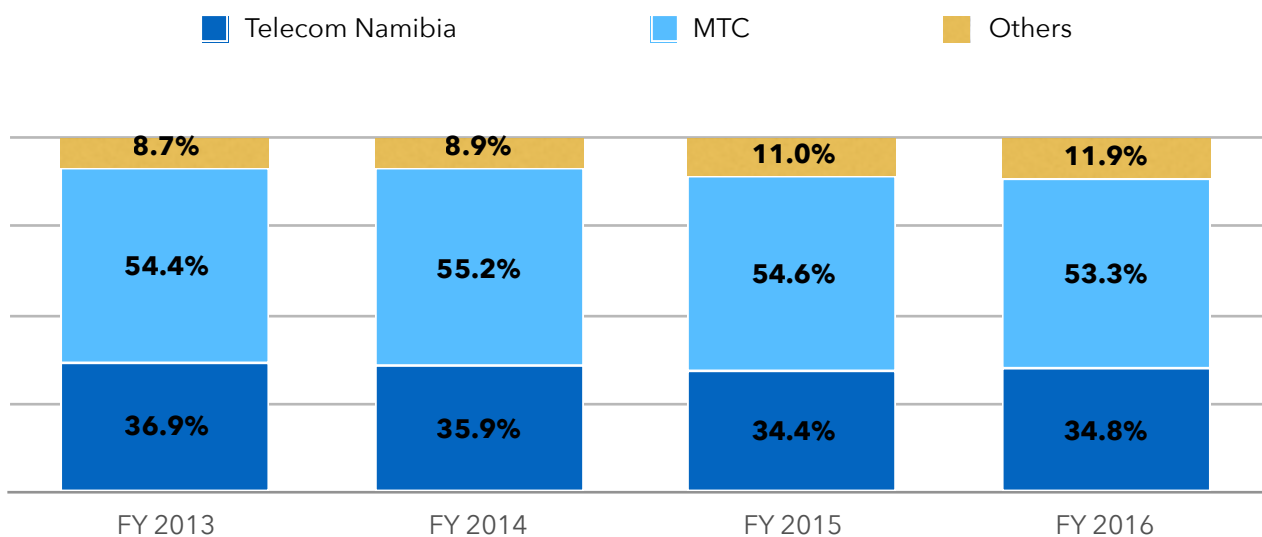


Figure 5: Revenues as market shares for the financial years ending in 2013- 2016 (company)

While Telecom Namibia and MTC dominate the industry, it is also clear that MTC is much more efficient since it generated 53.3% of the sector revenues with 40.5% of the assets. The differences in asset to revenue ratio can partly be explained by differing infrastructure required for service delivery of the two companies. Mobile telecommunication requires less assets compared to landlines and wired data connectivity.

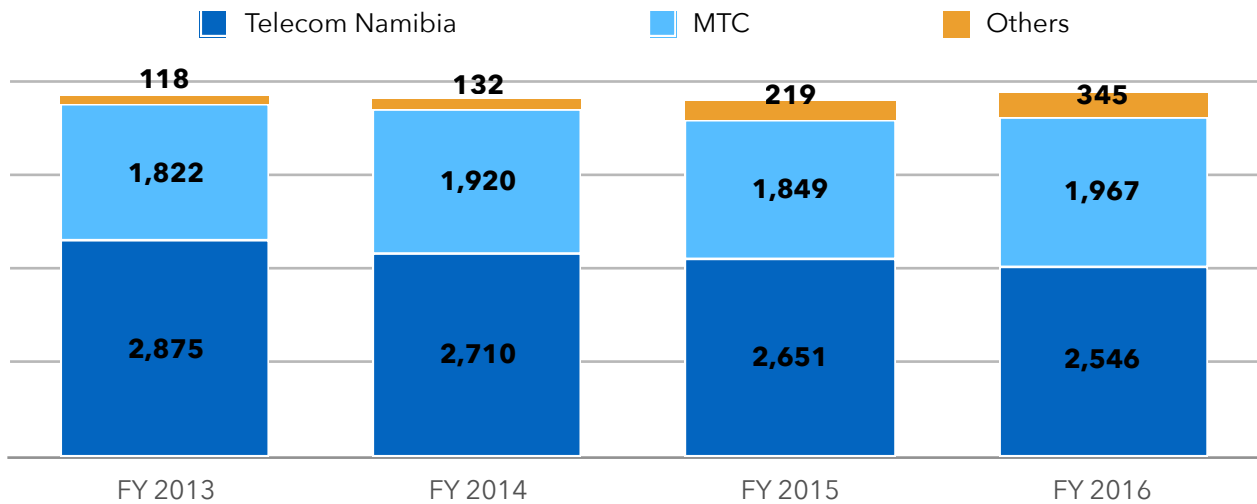


Figure 6: Assets in N\$ million for the financial years ending in 2013- 2016 (company)

Figure 6 shows a slight drop in asset value in Namibia’s ICT sector in 2015 and an increase again in 2016. Revenues increased significantly over the past four years.

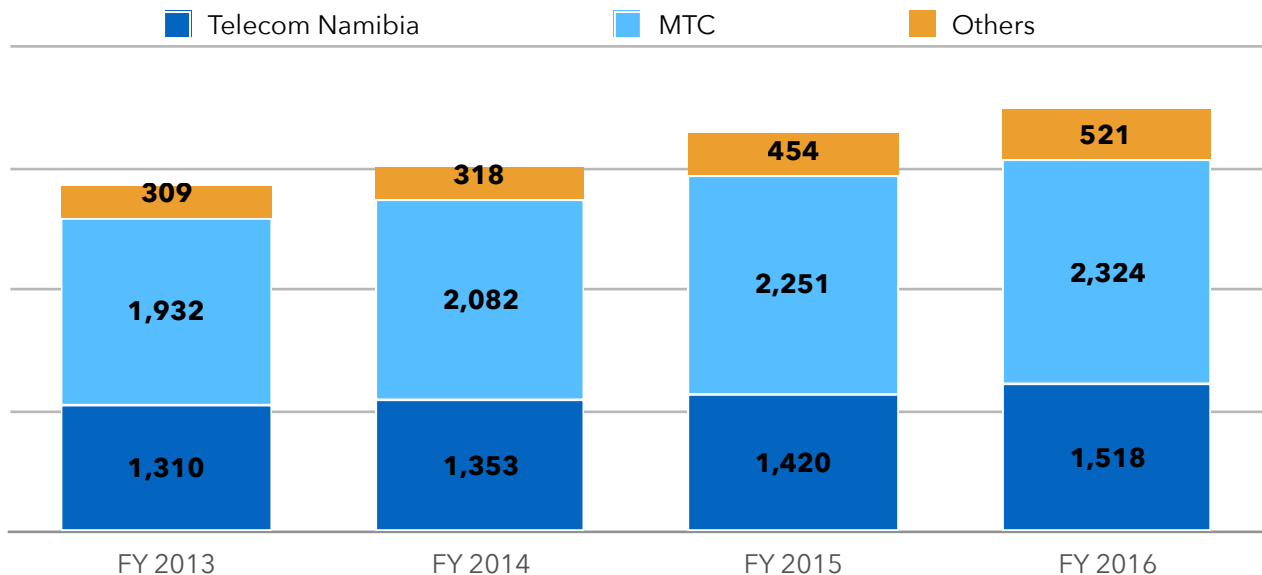


Figure 7: Revenues in N\$ million for the financial years ending in 2013- 2016 (company)

The asset turnover for smaller licensees has been much higher the past four years than for MTC and Telecom Namibia, which is not surprising since they mostly resell services based on Telecom Namibia’s assets. However, as the asset base increases, mostly due to investment in fiber networks, the asset turnover is converging (figure 8)

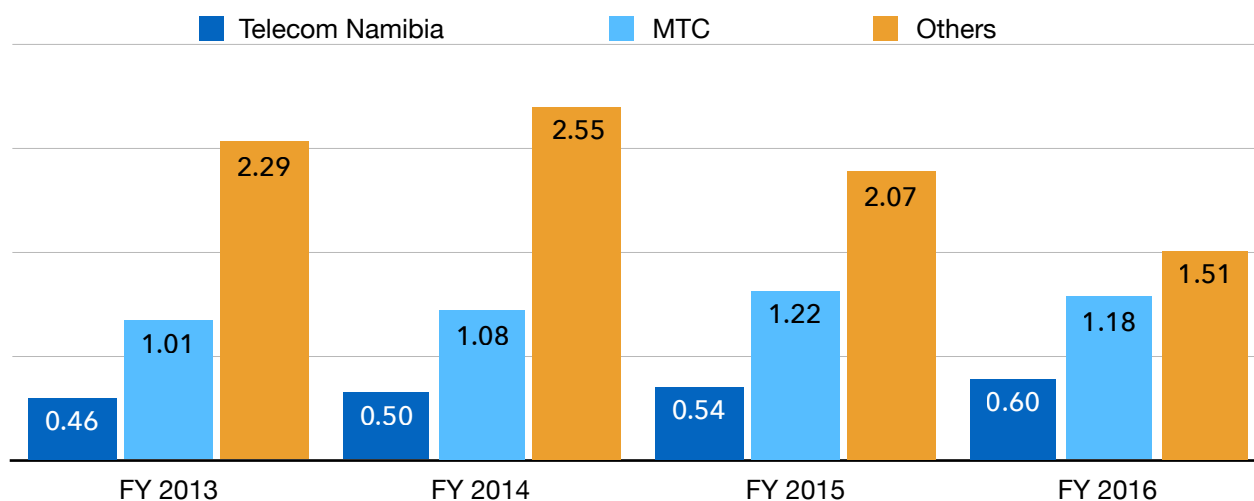


Figure 8: Asset turnover (revenues as share of assets) for financial year ending in 2013, 2014, 2015 and 2016 (company)

While revenues and assets are mostly controlled by Telecom Namibia and MTC, it is MTC that is responsible for the bulk of net profits in the ICT sector, 97% in 2016.

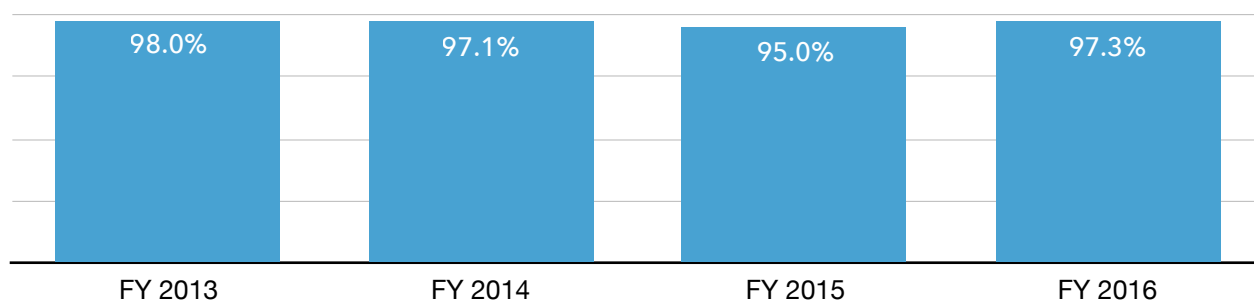


Figure 9: MTC's share of total net profits- losses excluded (company)

Competition is likely to be weaker in 2017 and beginning of 2018 due to the uncertainty about MTC's ownership and management after the transfer from Africatel Holdings B.V to Samba Luxco S.A.R.L and the resignation of the Managing Director, Miguel Gerales, immediately after the transfer was complete. In terms of investment, Paratus is the only serious contender for growth with a share of 15.3% of additions to property plant and equipment in the Financial Year 2016.

Table 2: Addition to Property, Plant & Equipment	2015		2016	
	N\$ million	%	N\$ million	%
MTC	108.9	44.1%	184.4	61.0%
TN Group	106.6	43.2%	69.1	22.9%
Paratus	25.7	10.4%	46.3	15.3%
MTN	0.7	0.3%		
Bidvest	3.7	1.5%	1.2	0.4%
SALT	1.3	0.5%	1.1	0.4%

Total	246.8	100.0%	302.1	100.0%
Source:	annual reports			

Mobile Telecommunications Limited (MTC)

MTC's revenues increased consistently and it yielded phenomenal EBITDA margins of above 50% in the last seven years, with 56.2% in 2016.

MTC's shareholders benefitted from a return on equity of N\$0.45 per N\$1 invested in 2016. The shareholder's equity nearly doubled in the past ten years, an increase from N\$646 million to N\$1,284 million, despite high dividend payments. Dividends paid by MTC increased from million N\$110 to million N\$481 during the past ten years, an increase in payout of almost four times. Most of the after-tax profits were disbursed as dividends in the past seven years and exceeded company profits in 2011 and 2015. Above profit dividend payments signal that MTC does not see much scope for network expansion.

Table 3: MTC's KPIs Company		2010	2011	2012	2013	2014	2015	2016
Revenue	N\$ million	1,407	1,453	1,617	1,832	2,082	2,251	2,324
	YoY growth		3.3%	11.3%	13.3%	13.7%	8.1%	3.2%
Shareholders' equity	N\$ million	1,166	1,121	1,132	1,173	1,212	1,186	1,284
	YoY growth		-3.9%	1.0%	3.6%	3.3%	-2.2%	8.3%
Taxation N\$ million		187	160	167	248	241	231	272
Net profit after tax	N\$ million	397	319	353	425	505	491	579
	YoY growth		-19.6%	10.7%	20.3%	18.9%	-2.7%	17.9%
Depreciation	N\$ million	154.8	174.9	207.7	205.5	231.4	231.9	198.2
	% of revenues	11.0%	12.0%	12.8%	11.2%	11.1%	10.3%	8.5%
Total assets	N\$ million	1,791	1,696	1,711	1,822	1,920	1,849	1,967
	YoY growth		-5.3%	0.9%	6.5%	5.4%	-3.7%	6.4%
Total liabilities (N\$ million)		625	575	579	649	704	663	682
Asset Turnover		0.79	0.86	0.95	1.01	1.08	1.22	1.18
Financial leverage		0.54	0.51	0.51	0.55	0.58	0.56	0.53
Dividends	N\$ million	384	364	341	384	462	522	481
	% of after tax profit	96.7%	114.1%	96.6%	90.4%	91.5%	106.2%	83.0%
Return on equity		34.0%	28.5%	31.2%	36.2%	41.7%	41.5%	45.1%
Profit margin		28.2%	22.0%	21.8%	23.2%	24.3%	21.8%	24.9%
EBITDA		786	775	860	1,007	1,138	1,178	1,305
EBITDA margin		55.8%	53.2%	53.2%	55.0%	54.7%	52.4%	56.2%
Active SIM cards in 1000		1,535.0	1,854.7	2,042.6	2,380	2,574	2,443	2,422
Full-time staff		395	407	421	461	488	517	518
Monthly ARPU in N\$ (calculated not reported)		76	65	66	64	67	77	80
Source:		MTC annual reports, 2005-16						

Additions to property, plant and equipment ⁴dropped in the financial years ending in 2014 and 2015 significantly and rose again in 2016. The days where 50% of net profits are being reinvested are over and MTC seems to settle for 20% to 30%, a further indication of the limited growth potential that MTC expects.

Given MTC's factual mobile monopoly, this is of concern since the next growth wave, mobile broadband, may be missed or delayed. MTC's 3G/4G population coverage is only a fraction of South Africa's, for examples, 40% instead of 77.6% (ITU 2016 indicator database).

Table 4: MTC's CAPEX		2010	2011	2012	2013	2014	2015	2016
Net profit after tax	N\$ million	397	319	353	425	505	491	579
Addition to Property, Plant & Equipment	N\$ million	232	127	208	222	161	109	184
	YoY growth		-45.2%	63.5%	7.1%	-27.5%	-32.5%	69.3%
	% of after tax profit	58%	40%	59%	52%	32%	22%	32%
Addition to Network Equipment	N\$ million	165	102	179	101	109	91	148
	% of after tax profit	42%	32%	51%	24%	21%	19%	26%
Source:		MTC annual reports, 2005-16						

While EBITDA margins still increase revenue growth has slowed down. Revenues only grew by 3.2% in 2016, while net profit grew by 17.9%. MTC is being run as a cash cow and not an innovative expanding business any longer. Increasing prices will not grow the revenue potential, while upgrading the network would. MTC's ability to sell more data is mainly limited by its outdated network.

Telecom Namibia Limited (Company)

Telecom Namibia (TN) managed to grow revenues by 7% despite declining fixed-line and mobile revenues (Table 7). This is twice the revenue growth of MTC for 2016. TN's shareholders, however, continue to bleed, with negative return on equity at company and group level in 2016.

Table 5: Telecom Namibia's annual report data for company		2010	2011	2012	2013	2014	2015	2016
Revenue	N\$ million	1,134	1,143	1,223	1,310	1,353	1,420	1,518
	YoY growth		0.8%	7.0%	7.1%	3.3%	5.0%	6.9%
Taxation	N\$ million	18	40	27	-18	102	66	19
Net profit/loss after tax	N\$ million	69.7	50.6	56.6	-87.5	-555.6	-83.9	-41.2
Total assets	N\$ million	2,534	2,566	2,629	2,875	2,710	2,651	2,546
	YoY growth		1.3%	2.4%	9.4%	-5.8%	-2.2%	-4.0%
Total liabilities	N\$ million	1,393	1,374	1,376	1,744	2,134	1,759	1,695
	YoY growth		-1.4%	0.2%	26.7%	2.0%	-17.5%	-3.6%
Gearing		55.0%	53.5%	52.4%	60.6%	78.7%	66.4%	66.6%
Shareholders' Equity	N\$ million	1,141	1,192	1,252	1,132	576	892	851
	YoY growth		4.5%	5.1%	-9.7%	-49.1%	54.9%	-4.6%

⁴ Investment from a regulatory perspective refers to additions to property plant and equipment, in particular additions to telecommunications equipment. Capital expenditure reported in glossy annual reports by mobile operators often include marketing expenses for customer and acquisition expenditure, neither of which increases network quality.

Table 5: Telecom Namibia's annual report data for company		2010	2011	2012	2013	2014	2015	2016
Dividend	N\$ million	0	0	0	0	0	0	0
Asset Turnover		0.45	0.45	0.47	0.46	0.50	0.54	0.60
Return on Equity		6.1%	4.2%	4.5%	-7.7%	-96.5%	-9.4%	-4.8%
Financial Leverage		1.2	1.2	1.1	1.5	3.7	2.0	2.0
Profit Margin		6.1%	4.4%	4.6%	-6.7%	-41.1%	-5.9%	-2.7%
Source:		Annual reports, 2006-16						

The companies shareholder's equity continues to decline despite the 2015 cash injection of million N\$ 400 from Telecom's holding company Namibia Post and Telecom Holdings (NPTH).⁵

TN's net loss for the financial year ending in 2014 was million N\$556.3 and for 2015 million N\$83.9. The net loss dropped to million N\$41 in the financial year ending in 2016, indicating that TN may become profitable again in 2017 or 2018 if it can gain efficiency and focus on growing revenue streams; wholesale prearranged connectivity in the form of leased lines, ADSL, FTTx and metro ethernet.

Table 6: Telecom Namibia's annual report data for Group		2010	2011	2012	2013	2014	2015	2016
Revenue	N\$ million	1134	1143	1,223	1,312	1,378	1,431	1,532
	YoY growth		0.8%	7.0%	7.3%	5.0%	3.8%	7.1%
Net profit/loss after tax	N\$ million	-122	-87	57	-168	-205	-54	-26
Total assets	N\$ million	2186	1992	1,593	2,370	2,514	2,435	2,316
	YoY growth		-8.9%	-20.1%	48.8%	6.1%	-3.1%	-4.9%
Total liabilities	N\$ million	1464	1374	1376	1,896	2,246	1,823	1,731
	YoY growth		-6.1%	0.2%	37.8%	18.4%	-18.8%	-5.1%
Gearing		67.0%	69.0%	86.4%	80.0%	89.3%	74.9%	74.7%
Shareholders' Equity	N\$ million	722	618	216	474	268	612	586
	YoY growth		-14.4%	-65.0%	119.0%	-43.3%	128.0%	-4.3%
Return on Equity		-16.9%	-14.2%	26.1%	-35.4%	-76.5%	-8.8%	-4.5%
Financial Leverage		2.0	2.2	6.4	4.0	8.4	3.0	3.0
Profit Margin		-10.8%	-7.7%	4.6%	-12.8%	-14.9%	-3.7%	-1.7%
Addition to Property, Plant & Equipment: All	N\$ million	156.4	173.2	235.1	445.4	332.4	137.3	125.3
	YoY growth		10.8%	35.7%	89.4%	-25.4%	-58.7%	-8.8%
Source:		Annual reports, 2006-16						

Given its monopoly for fixed-line telephony and dominant position for fiber backbone, Telecom Namibia should be expected to be profitable. Instead, shareholders equity on group level has decreased from million N\$722 in 2010 to million N\$586 in 2016. This is the result of poor investment decisions in the past.

⁵ <http://www.observer.com.na/index.php/8-latest-news/4309-npth-bails-out-telecom>

Table 7: Telecom Namibia's Group Revenue Segmentation		2010	2011	2012	2013	2014	2015	2016
Mobile	N\$ million			44.6	69.2	160.4	170.5	108.3
Fixed voice revenues incl. interconnection revenues	N\$ million	639.4	536	516.4	437.1	418.5	407.4	399.1
	YoY growth		-16.2%	-3.7%	-15.4%	-4.3%	-2.6%	-2.1%
Data and IP services revenues	N\$ million	417	452	541.7	637.9	652.1	705.0	875.9
	YoY growth		8.4%	19.8%	17.8%	2.2%	8.1%	24.2%
Source:		Annual reports, 2010-16						

TN also reports on segment profits. This reveals that the profit margins are the highest for fixed voice and interconnection revenues with 81%. Fixed-voice remains a cash cow for TN.

Table 8: Telecom Namibia's Group Revenue and profit segmentation for 2016	Segment revenue N\$ million	Segment Profit N\$ million	Profit as share of revenues
Mobile	108.3	65.5	60.5%
Fixed voice revenues incl. interconnection revenues	399.1	322.9	80.9%
Data and IP services revenues	875.9	445.4	50.8%
Source:	Annual reports, 2010-16		

The segment profits mask, however, the main problem that TN faces in becoming a profitable operator, excessive administrative expenses, which make up half of the revenues.

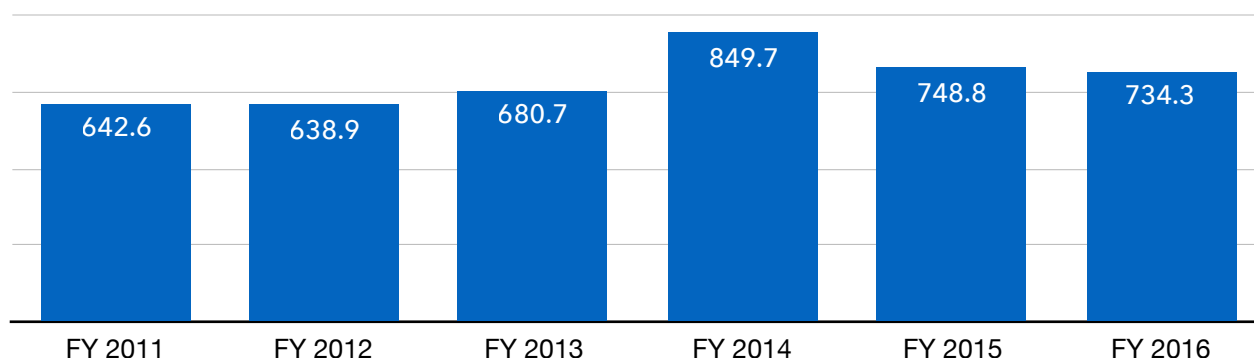


Figure 10: TN's administrative expenses in million N\$ (company)

Deloitte, Telecom Namibia's auditor, noted in the Audited financial statement for the 2015 and 2016 financial years, that current liabilities exceed current assets. This, coupled with continued losses at group and company level casts doubt on Telecom Namibia viability going forward.

Conclusion

Namibia's telecommunication sector is dominated by MTC and Telecom Namibia. All other licensees make less than 12% of turnover and mostly resell services of Telecom Namibia and MTC. Telecom Namibia's financial performance raises serious concerns. Its foreign failed investments and takeover of Leo have left its domestic operations vulnerable and limits its capacity to invest and innovate. Telecom Namibia's mobile operation failed to pose serious competition to MTC in 2016. MTC's investment levels and high ROEs indicate that it does not

see the need to compete and innovate and instead focusses on excess profits for its shareholders.

Telecommunication Subscribers

The number of active SIM cards continue to increase and stood at 2.66 million in December 2016, a slight increase of 3.3% during the last half of 2016. Postpaid subscribers grew by 4.9%, which can likely be attributed to the increase in mobile broadband and the need for faster (4G) smartphones. Overall mobile broadband adoption continues with an upward trend with dongle/router usage declining. This may be due to smartphones doubling as hotspots and a shift of Internet use away from computers and laptop to mobile phones.

Table 9: Mobile subscriber numbers in 1000s		2013 June	2013 Dec	2014 June	2014 Dec	2015 June	2015 Dec	2016 June	2016 Dec
Active SIM cards ('000)	Postpaid	155	152	158	168	176	180	182	191
	Prepaid	2,330	2,308	2,357	2,503	2,502	2,370	2,393	2,469
	Total	2,485	2,539	2,515	2,671	2,678	2,550	2,575	2,660
	Change		2.2%	-0.9%	6.2%	0.3%	-4.8%	1.0%	3.3%
Mobile Broadband ('000)	Dongle / Routers	63	67	66	70	48	37	33	31
	Mobile Phone	657	721	692	732	809	1,406	1,455	1,580
	Total	720	788	758	802	857	1,443	1,488	1,611
	Change		9.4%	-3.8%	5.8%	6.9%	68.4%	3.1%	8.3%

Fixed-line subscriptions remain stagnant between 181,000 and 188,000. Fixed-lines are a cash cow (see profit segmentation) and TN does not seem to invest much to widen the customer base.

Table 10: Fixed-line subscribers	2013 June	2013 Dec	2014 June	2014 Dec	2015 June	2015 Dec	2016 June	2016 Dec
Business	98,116	99,107	100,714	121,871	118,423	119,975	120,574	121,517
Residential	83,580	84,425	85,794	60,722	60,818	62,532	64,961	66,336
Total	181,696	183,532	186,508	182,593	179,241	182,507	185,535	187,853

The next major investment would be to convert all existing voice lines into data lines. Currently, this is a gradual process, reflected in continuous increase of ADSL subscriptions.

Table 11: Other subscribers		2013 June	2013 Dec	2014 June	2014 Dec	2015 June	2015 Dec	2016 June	2016 Dec
ADSL	10 Mbps and above	38	57	65	84	135	224	254	416
	2 to 10 Mbps	1,955	4,014	4,288	5,087	5,749	6,307	7,025	8,706
	below 2Mbps	24,345	29,776	31,808	36,041	38,358	39,660	41,110	44,259
	Total	26,598	33,847	36,162	41,213	44,243	46,192	48,390	53,381
	Total YoY growth		27.3%	6.8%	14.0%	7.4%	4.4%	4.8%	10.3%
fiber to the home					11	12	11	122	158
MetroNet (ethernet)			5	5	5	4	32	52	57
Leased lines		9,445	10,189	10,572	10,875	8,823	8,462	7,348	9,874
IDSN Dialup		19,943	11,940	14,980	11,350	12,508	13,636	11,294	11,663
Fixed-wireless		1,311	1,293	2,499	3,032	1,698	1,818	1,038	514
Other wireless		171	90	97	123	77	53	60	14

Table 11: Other subscribers	2013 June	2013 Dec	2014 June	2014 Dec	2015 June	2015 Dec	2016 June	2016 Dec
Satellite / VSAT	260	266	290	319	337	354	354	354
VoIP		7	46	66	77	127	139	3,286

The number of high-speed ADSL subscriptions is still low at 416 in December 2016 while fiber to the home (FTTh) has started rolling out in Namibia, with 158 installations. ADSL Internet connection increased by 10.3% in the second half of 2016 in total, possibly a result of degrading speeds experienced with mobile broadband in congested areas. ADSL is the main reason for a household to keep its land-line.

Fixed VoIP services have seen a dramatic increase in the second half of 2016 with an increase from 139 to 3286 subscriptions. A trend likely to continue for the foreseeable future.

Mobile Telecommunication KPIs

This section analyses Key Performance Indicators (KPIs) for the two national mobile operators, TN Mobile and MTC.

MTC - KPIs

Prices are top level indicators that reflect the competitive environment most effectively. They need to be interpreted in conjunction with others KPIs such as Average Revenue Per User (ARPU), Minutes of Use (MOU) and subscriber numbers. Implied prices are calculated by taking the monthly average revenue per user (ARPU) and dividing it by the monthly average minutes of use per user (MOU). Analysing implied prices provides a picture on price developments independent of advertised prices and product choices of users. They are not actual prices per minute since Voice ARPUs may include non-voice items such as handsets, termination rate revenues and revenue for SMS. The trend is as important as the effective price value.

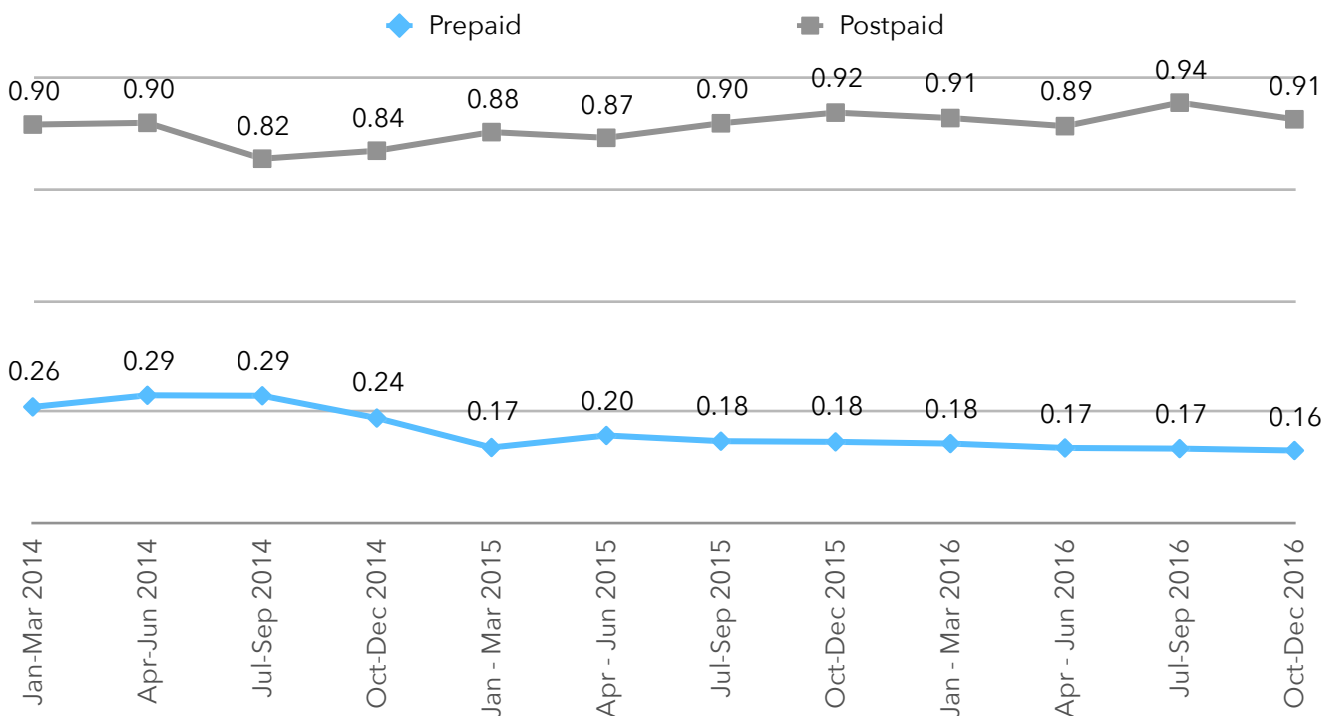


Figure 11: MTC's implied prices (voice ARPU divided by MOU)

Prepaid minutes costed below 20 cents per minute in 2016. MTC's implied price for postpaid products is much higher, hovering around N\$0.90 per minute in 2016. The reason for the high postpaid effective price might be the inclusion of handsets in the Voice ARPU figures. They can either be directly or indirectly priced into the monthly subscription amount. Prepaid ARPU's are thus a better indicator of implied per minute prices.

Any operator wishing to compete with MTC in Namibia would need to build a business model around an effective price of N\$0.2 to be able to compete on price with MTC.

At the moment, there does not seem to be any competitive pressure that would require MTC to cut its postpaid prices dramatically in order to align them with prepaid prices. MTC is currently competing against itself: postpaid versus prepaid. With postpaid customers typically being locked in for 24 months, one would have expected a drop in postpaid subscribers in 2016, but this did not materialise.

Table 12: MTC-s prepaid and postpaid subscribers	Prepaid		Postpaid		Total	
	Active SIM cards	YoY	Active SIM cards	YoY	Active SIM cards	YoY
Jul-Sept 2012	1,922,147		120,448		2,042,595	
Oct-Dec 2012	2,024,498	5.3%	122,335	1.6%	2,146,833	5.1%
Jan-Mar 2013	2,065,259	2.0%	123,210	0.7%	2,188,469	1.9%
Apr-Jun 2013	2,074,708	0.5%	125,581	1.9%	2,200,289	0.5%
Jul-Sep 2013	2,141,481	3.2%	128,020	1.9%	2,269,501	3.1%
Oct-Dec 2013	2,248,022	5.0%	132,260	3.3%	2,380,282	4.9%
Jan-Mar 2014	2,273,881	1.2%	136,197	3.0%	2,410,078	1.3%
Apr-Jun 2014	2,275,159	0.1%	139,122	2.1%	2,414,281	0.2%
Jul-Sep 2014	2,328,969	2.4%	143,124	2.9%	2,472,093	2.4%
Oct-Dec 2014	2,427,042	4.2%	146,852	2.6%	2,573,894	4.1%
Jan - Mar 2015	2,457,172	1.2%	148,062	0.8%	2,605,234	1.2%
Apr - Jun 2015	2,423,471	-1.4%	149,860	1.2%	2,573,331	-1.2%
Jul-Sep 2015	2,226,874	-8.1%	150,659	0.5%	2,377,533	-7.6%
Oct-Dec 2015	2,290,458	2.9%	152,182	1.0%	2,442,640	2.7%
Jan - Mar 2016	2,287,573	-0.1%	153,524	0.9%	2,441,097	-0.1%
Apr - Jun 2016	2,250,188	-1.6%	156,673	2.1%	2,406,861	-1.4%
Jul-Sep 2016	2,395,162	6.4%	187,674	19.8%	2,582,836	7.3%
Oct-Dec 2016	2,469,351	3.1%	190,600	1.6%	2,659,951	3.0%

The only drop in active sim card happened for prepaid, not postpaid. Reasons for a user keeping their postpaid number includes getting the handset financed and convenience of not running out of airtime and having to recharge. Companies also increasingly rely on mobile phones for in-house communication instead of using a fixed-line PABX, creating a solid block of customers that would not change to prepaid if they had the choice.

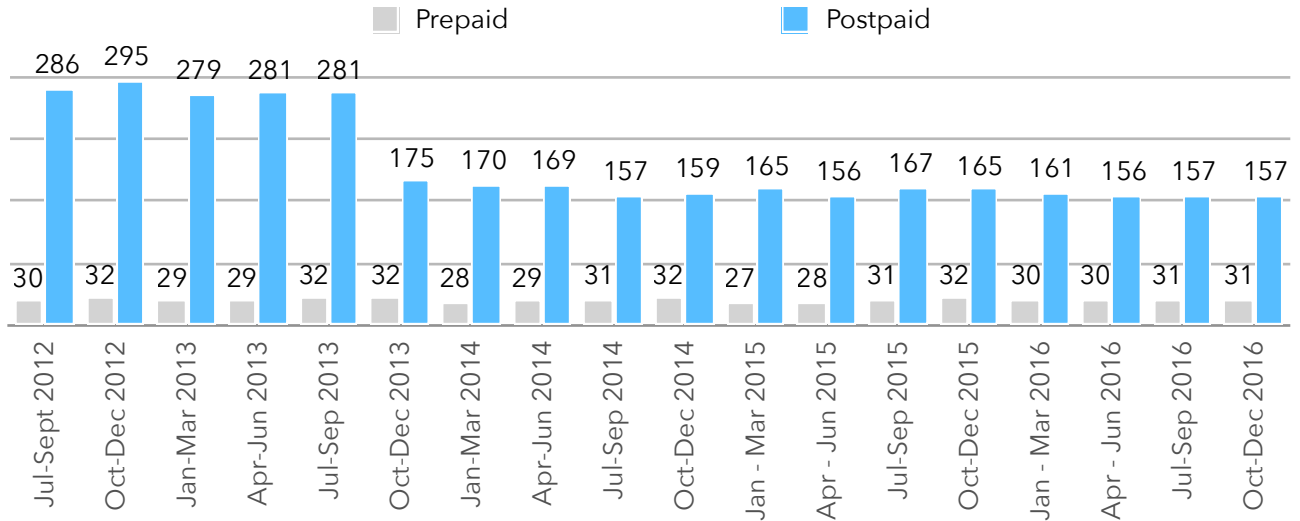


Figure 12: MTC Voice ARPU

Two trends may affect the postpaid ARPU in opposite ways. The replacement of feature phones by smart phones leads to an increase in postpaid ARPUs, while the declining smart phone prices lead to a decrease. Postpaid monthly average minutes of use (MOU) declined since 2012 until the first quarter of 2014, where it started to increase again and then remained on a fairly steady level. Prepaid MOU on the other hand, continues to rise, due to the bundling products of the Aweh family.

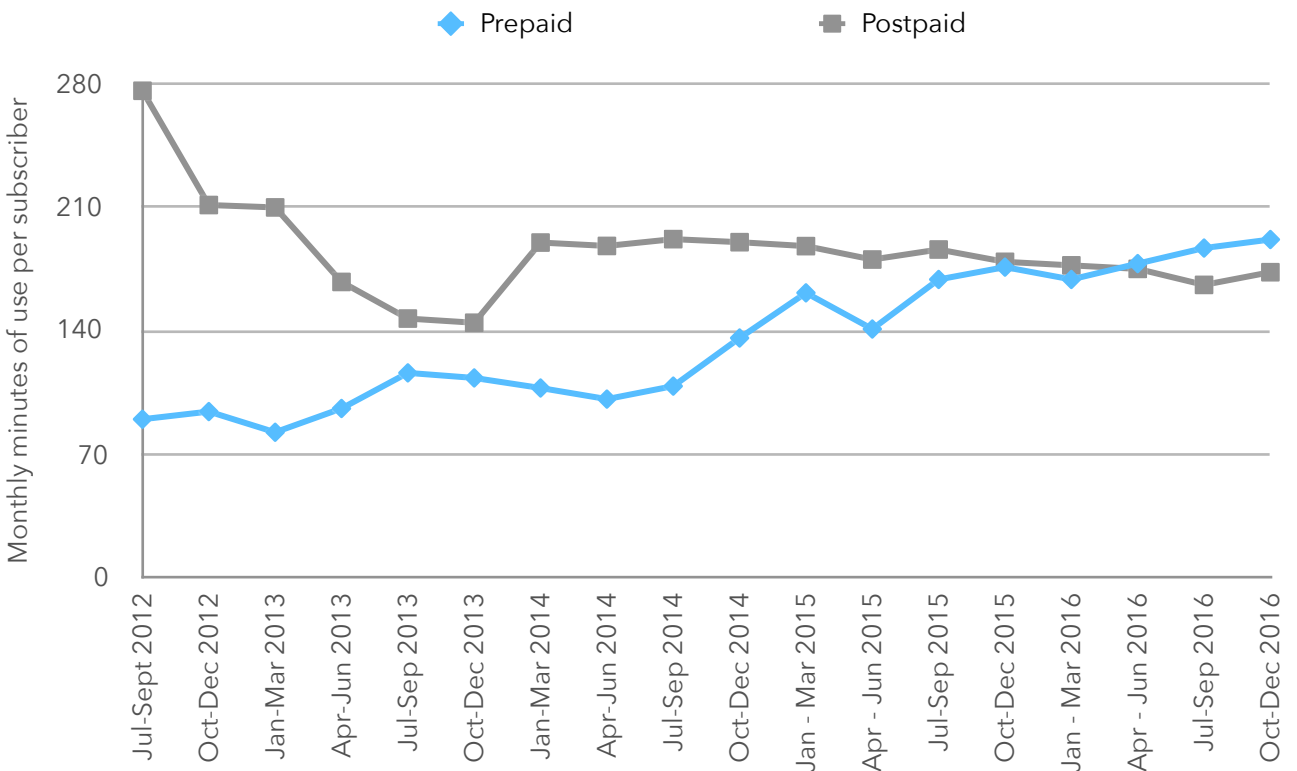


Figure 13: MTC MOU

Other trends that influence ARPU and MOU are a shift to Over The Top (OTT)⁶ services, a postpaid/prepaid substitution and new postpaid product design.

- When new postpaid products offer more bundled minutes than before at the same monthly subscription level then this will reduce the out-of-bundle calling.
- Most contract (postpaid) subscribers use smart phones and feature phones that support OTT use such as WhatsApp, Facebook, Skype, etc. Out-of-bundle calling may be reduced and replaced by OTTs.
- Postpaid/prepaid substitution may not necessarily be a SIM card swap but a usage substitution. A contract subscriber may use a prepaid SIM card alongside the contract for out-of-bundle use or cheap data connectivity. It may be a combination of all three that explains these trends.

Mobile versus data revenues

Data revenues as percent share of voice revenues continue to increase. At the end of 2016 data revenues made up 61% of voice revenues. For 2017 data revenues can be expected to close the gap further. However, data revenue growth currently is limited by the outdated network that MTC operates in most of Namibia. 3G /4G coverage is at a low 40% compared to about 80% in South Africa. This limits the data use of everyone living in a 2G coverage area only, around 55% of the population, with about 5% having no coverage at all.

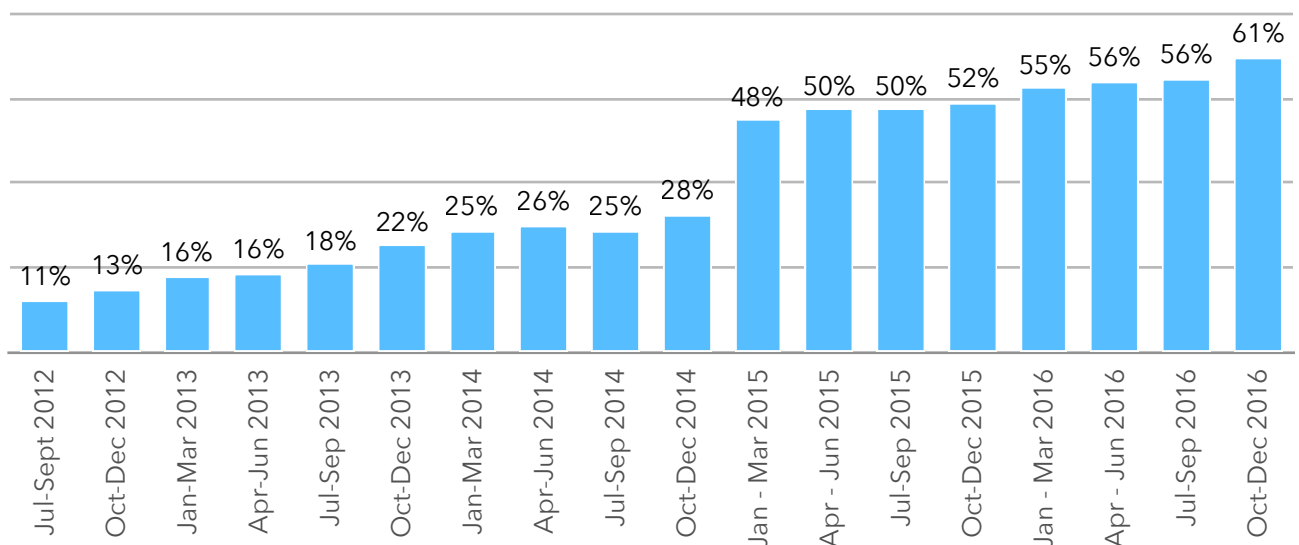


Figure 14: MTC Data revenues as share of voice revenues

Subscribers

While active mobile broadband subscribers grew since 2012, the number of subscribers using dedicated dongles dropped considerably in the first half of 2015 and continues to fall. This is the result of a shift in access patterns away from computers and laptops and towards smart phones and tablets.

⁶ Over-the-top series are provided by third parties and may include text messaging, voice calls and media content. WhatsApp, Facebook, Skype, Viber, Talkray, FaceTime are examples for OTT services.

Table 13: MTC Data Subscribers	Jan - Jun 2014	Jul -Dec 2014	Jan - Jun 2015	Jul -Dec 2015	Jan - Jun 2016	Jul -Dec 2016
Standard mobile-broadband subscriptions (on mobile phones)	692,219	732,368	808,859	1,406,299	1,488,353	1,611,384
Dedicated mobile-broadband subscriptions (dongles)	65,830	69,945	48,101	37,432	33,303	31,251
All mobile-broadband subscriptions	758,049	802,313	856,960	1,443,731	1,455,050	1,580,133

TN Mobile - KPIs

TN replicated the Aweh product family with Jiva products, and even increased the bundled data and social media data to comparable Aweh products slightly. This led to the implied per minute price for prepaid, averaging around N\$0.23 per minute in 2016, to get close to the implied prepaid price per minute from MTC.

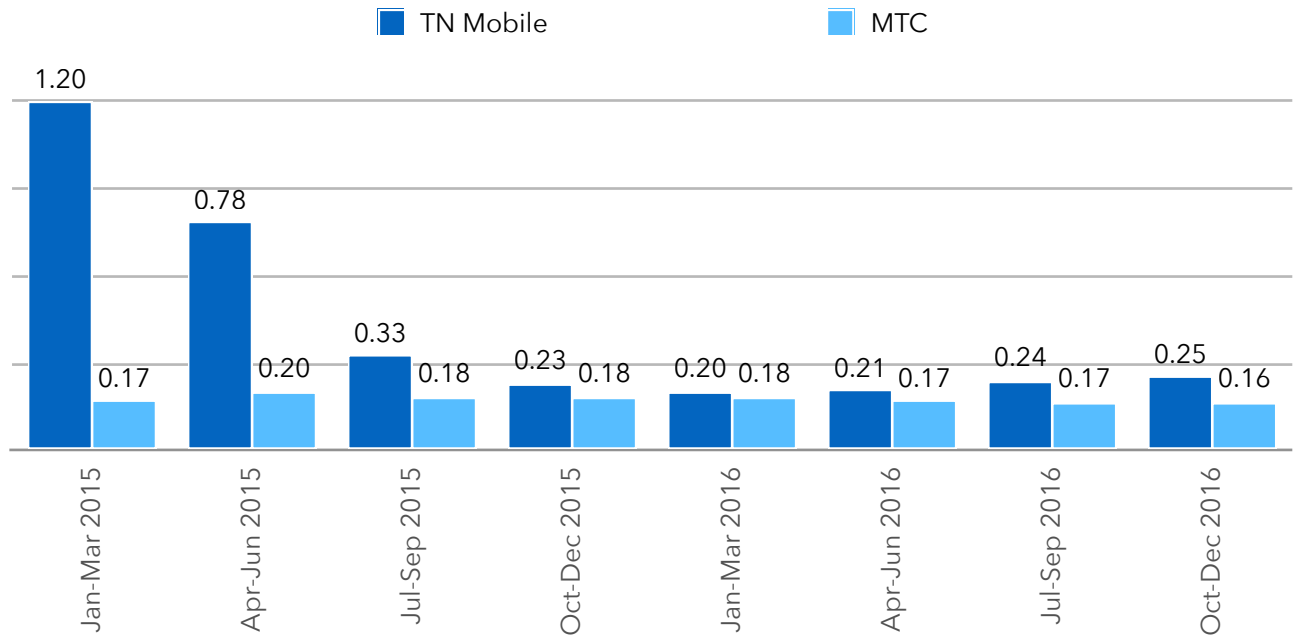


Figure 15: Prepaid implied prices (voice APRU divided by MOU)

The implied postpaid prices for TN are much lower than those of MTC. The main reason could be the handsets bundled by the two operators. Handsets are captured as voice revenues. Judging by handsets advertised in the media by the two companies it seems that MTC has more high-value handset in their offering.

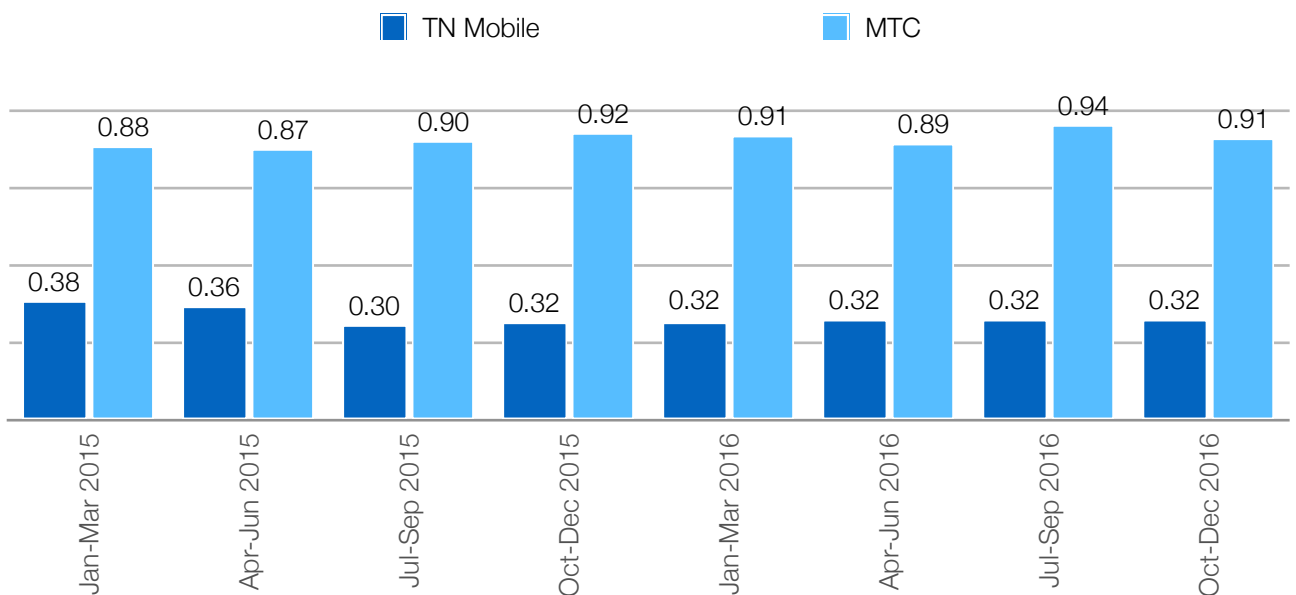


Figure 16: Postpaid implied prices (voice APRU divided by MOU)

TN Mobile managed to grow prepaid and prepaid subscribers in 2016 and had 187,000 active SIM cards registered on its network.

Table 14: TN Mobile KPI's		2014				2015				2016			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Voice ARPU - Monthly	Prepaid voice	10.0	10.5	14.1	12.5	10.9	8.5	7.0	5.1	3.9	3.5	4.0	4.0
	Postpaid voice	81.3	68.4	60.8	49.8	44.1	38.6	37.7	39.1	36.8	34.4	35.0	34.0
MOU- Monthly	Prepaid	7	13	9	13	9	11	21	22	19	17	17	16
	Postpaid	129	124	124	109	116	107	124	124	116	109	109	105
Implied price per minute	Prepaid	1.42	0.83	1.55	0.99	1.20	0.78	0.33	0.23	0.20	0.21	0.24	0.25
	Postpaid	0.63	0.55	0.49	0.46	0.38	0.36	0.30	0.32	0.32	0.32	0.32	0.32
Data ARPU monthly	Prepaid	2.79	2.71	4.07	4.57	4.29	3.14	1.16	1.68	0.46	0.69	1.00	1.00
	Postpaid	28.39	25.64	24.26	18.88	17.99	19.55	17.62	19.10	18.71	20.59	24.00	25.00
Active SIM cards in 1000	Prepaid	85.3	81.4	84.7	75.7	71.5	78.7	78.7	79.5	89.1	105.7	128.8	155.7
	Change		-4.6%	4.1%	-10.6%	-5.6%	10.0%	0.0%	1.0%	12.1%	18.6%	21.9%	20.9%
	Postpaid	18.1	19.0	20.0	21.4	24.6	25.7	25.7	27.7	28.3	28.6	29.8	31.5
	Change		4.9%	5.0%	7.0%	15.1%	4.5%	0.0%	7.7%	2.1%	1.2%	4.3%	5.6%
	Total	103.5	100.4	104.7	97.1	96.1	104.4	104.4	107.2	117.3	134.2	158.6	187.2
	Change		-3.0%	4.3%	-7.3%	-1.0%	8.6%	0.0%	2.7%	9.5%	14.4%	18.2%	18.0%

The low voice ARPU (Figure 17) and MOU (Figure 16) suggests that for many of TN's subscribers the TN SIM card is not the primary card and used in conjunction with an MTC card.

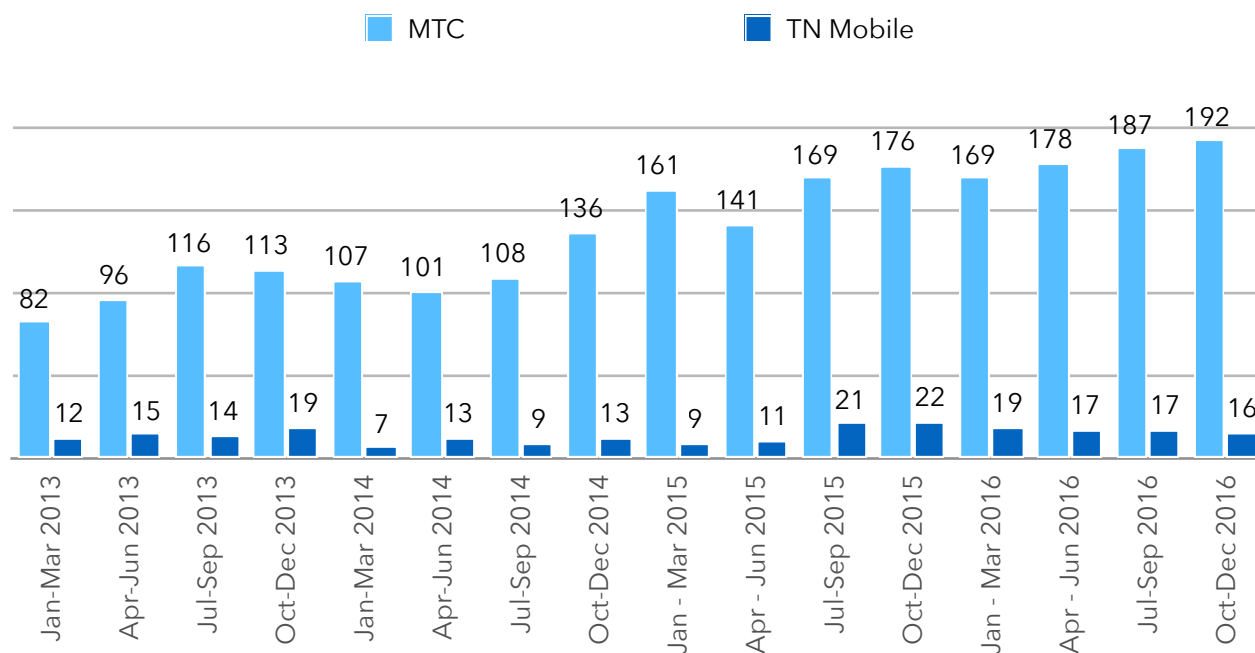


Figure 17: Prepaid MOU compared

It is unlikely that the lower ARPU and MOU could be due to poorer customer profiles, given that MTC reaches much further in its network coverage into rural areas than TN Mobile does.

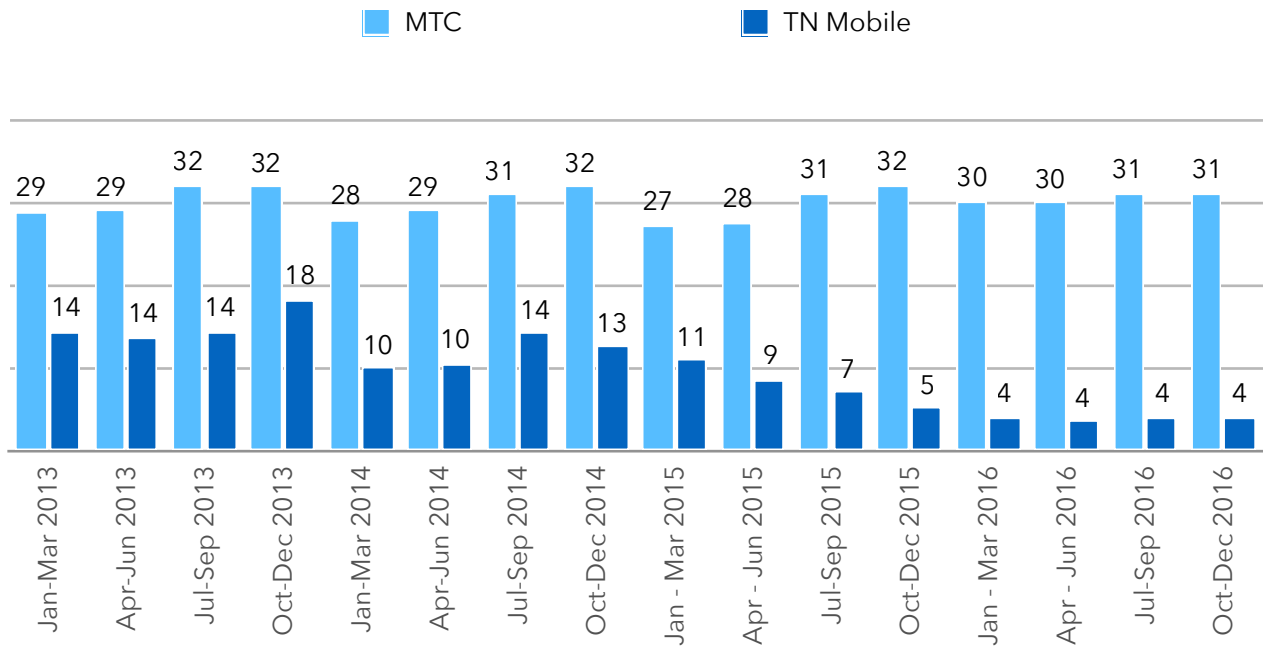


Figure 18: Prepaid Voice ARPU compared

Crucial for being considered to be a formidable competitor to MTC requires to match its size and quality of network or exceeding it. This requires considerable investment.

Mobile Traffic

MTC has a factual monopoly when it comes to outgoing traffic calls made and SMS sent. MTC’s market share was above 99% for both for the last two years.

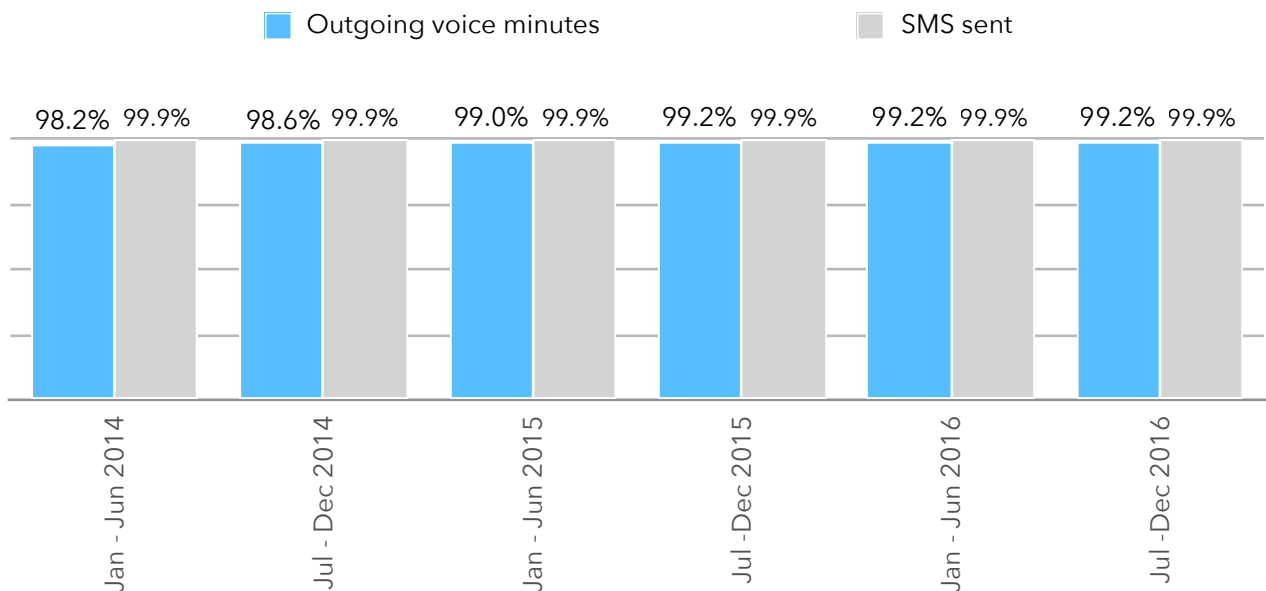


Figure 19: MTC's market share of total outgoing mobile voice and SMS

MTC’s outgoing traffic is mostly on-net and only 0.4% of minutes dialed by MTC customers were to TN Mobile subscribers in the second half of 2016.

This is despite off-net price caps, which safeguard that calls to other networks cost the same as calls within the own network. TN Mobile’s traffic is the inverse of that from MTC, mostly off-net (75%+), as one would expect for an operator with low subscriber numbers.

Table 15: Distribution of outgoing traffic by operator		Jul - Dec 2012	Jan - Jun 2013	Jul - Dec 2013	Jan - Jun 2014	Jul - Dec 2014	Jan - Jun 2015	Jul - Dec 2015	Jan - Jun 2016	Jul - Dec 2016
MTC	On net	97.3%	97.3%	97.2%	96.8%	96.9%	97.6%	97.7%	97.8%	97.8%
	Off-net mobile	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.4%
	Off-net fixed-line	1.5%	1.5%	1.7%	1.9%	1.8%	1.5%	1.4%	1.5%	1.4%
	International	0.9%	0.9%	0.8%	0.9%	0.9%	0.6%	0.5%	0.5%	0.4%
TN Mobile	On net	5.8%	5.0%	5.1%	4.6%	5.2%	5.3%	6.0%	5.5%	5.7%
	Off-net mobile	83.7%	83.8%	81.3%	78.2%	76.7%	75.5%	75.9%	77.1%	76.2%
	Off-net fixed-line	4.4%	5.5%	6.5%	6.0%	9.1%	13.1%	16.9%	17.3%	17.8%
	International	6.1%	5.7%	7.1%	11.2%	9.0%	6.0%	1.3%	0.1%	0.3%

International Traffic

International traffic continues to decline with the increased option of mobile broadband and Over The Top (OTT) services such as Facebook, Skype and WhatsApp. This is confirming the trends laid out in the Trend section.

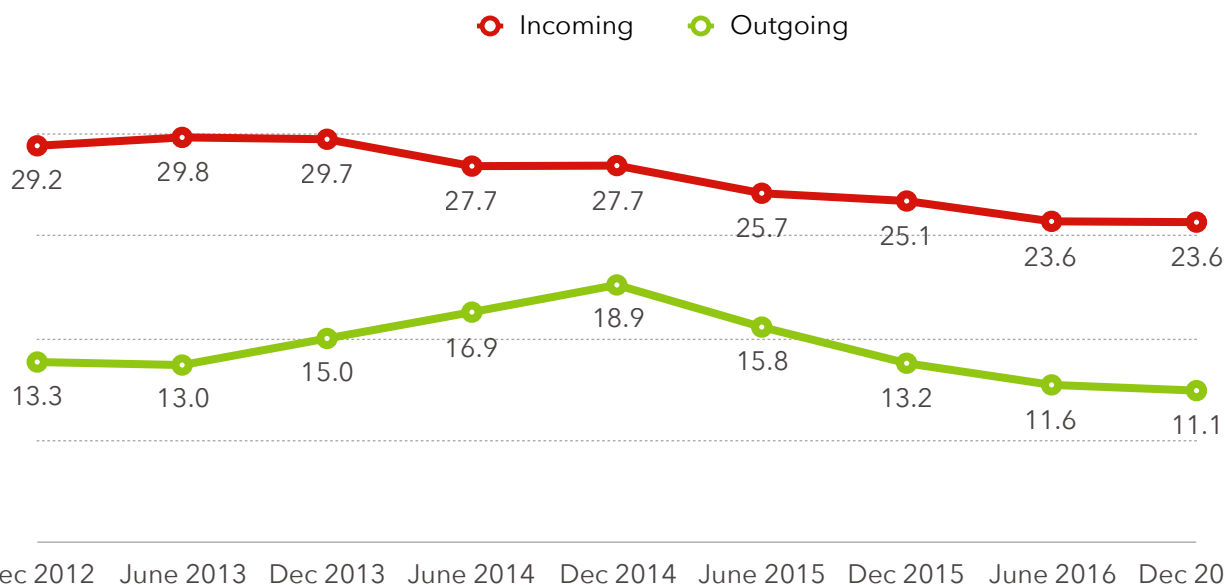


Figure 20: Fixed and mobile International incoming and outgoing minutes in million

Mobile Network Infrastructure

Telecom Namibia only has a fifth of the base stations (BTS) that MTC has installed. This poses a severe limitation for customer acquisition in the absence of a national roaming agreement. In terms of data connectivity, Telecom Namibia is at an advantage, due to its national fiber network and multiple international gateways.

Table 16: Mobile's Infrastructure		End Dec 2012	End June 2013	End Dec 2013	End June 2014	End Dec 2014	End June 2015	End Dec 2015	End June 2016	Jul - Dec 2016
Total international down link bandwidth in Gbit/s	MTC	1.5	1.3	2.6	3.9	5.1	4.7	3.7	5.3	5.2
	Telecom Namibia	4.1	4.7	10.3	12.3	8.2	11.9	17.0	18.3	28
Number of base stations (Mobile)	MTC	1042	1073	1088	1092	1110	1113	1246	1305	1310
	Telecom Namibia	266	269	278	230	320	320	269	277	274

Mobile Price Benchmarking

The reduced competition in the mobile sector as a result of the takeover of the only privately owned mobile operator by a 100% state owned entity, Telecom Namibia, and the uncertainty about the management of MTC lead to Namibia slipping in the African price benchmarking. Namibia ranks **16th** among African countries in terms of cheapest voice and SMS product in a country. Figure 21 compares the cost in USD of the cheapest prepaid mobile product available in Namibia, and in all of Africa, for the OECD⁷ 30 calls, 100 SMSs basket between Q1 2011 and Q2 2017.

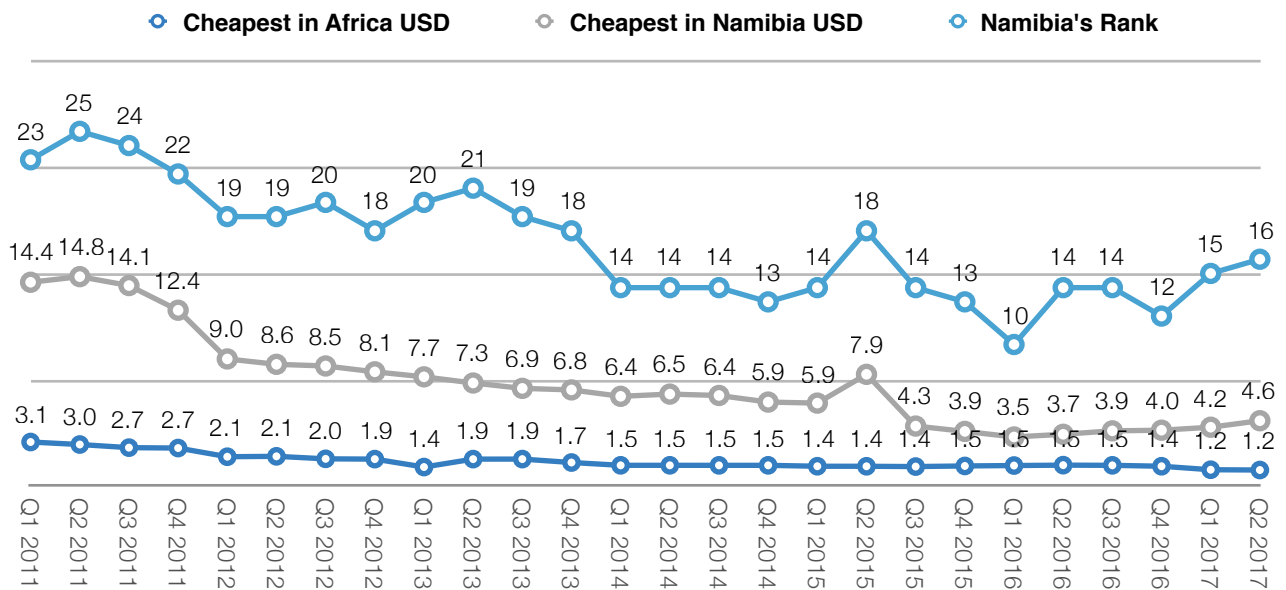


Figure 21: Ranking and cost of cheapest prepaid mobile product available in Namibia and Africa for OECD 30 calls/100 SMSs basket (Source: Research ICT Africa)

Namibia’s cheapest product rank improved from 23 in Q1 2011 to 16th in Q2 2017. While the ranking has not much improved, prices nevertheless have steadily been reducing in USD until the first quarter of 2016. The price benchmarking uses quarterly average exchange rates and some fluctuation in end-user cost is caused not by price but by exchange rate fluctuations.

Figure 22 displays the cheapest prices of TN Mobile and MTC for the 30 calls and 100 SMSs OECD basket in Namibian Dollar. MTC’s prices have slightly increased in Q2 2017, but MTC remains the cheapest operator for voice and SMS.

⁷ OECD (2010), Revision of the Methodology for Constructing Telecommunication Price Baskets, OECD Working Party on Communication Infrastructures and Services Policy.

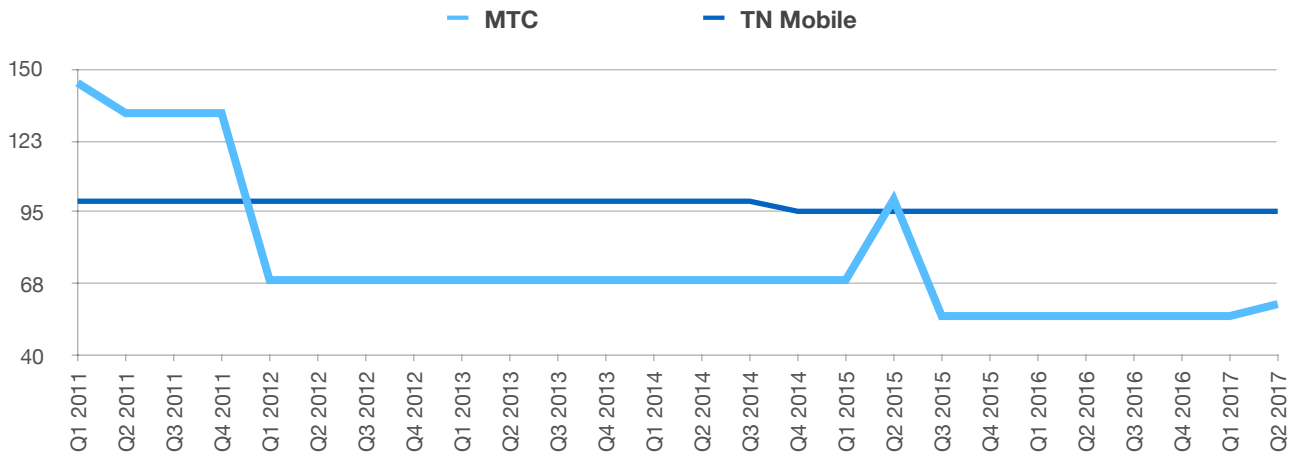


Figure 22: Cost of cheapest prepaid mobile product for OECD 30 calls and 100 SMSs basket by operators in N\$ (Source: Research ICT Africa)

In terms of prepaid mobile data, Namibia was among the cheapest 10 countries in Africa in 2015 but dropped to rank 21 by Q2 of 2017. This not because prices increased but because other countries having more effective competition leading to lower prices and faster roll-out of 4G networks.

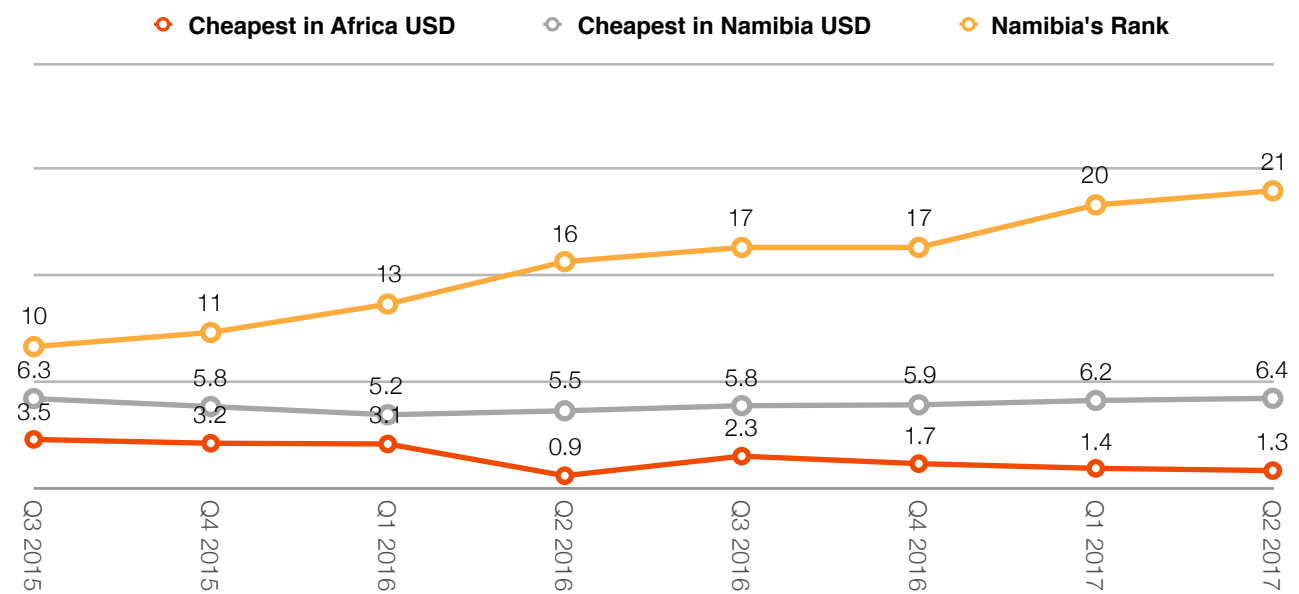


Figure 23: Ranking and cost of cheapest product for 1 GB mobile prepaid data with 1-month validity available in Namibia and Africa (Source: Research ICT Africa)

MTC and Telecom Namibia provide exceptional value to its prepaid customers through the Aweh and Jiva bundles. They resemble flat rate pricing for prepaid customers and give even poorer segments of the population affordable access to voice and data. Out of bundle top-up prices for data are, however, expensive. MTC and Telecom Namibia need to think about strategies to grow data demand in the medium term. The main limitation here seems to be supply. With a mostly 2G network, in the dawn of 5G, it does not make commercial sense to grow data demand through lower prices if that demand cannot be met. Network upgrade, in particular site backhaul, is thus the next logical step to lower prices and wider Internet use in Namibia.

Table 17: OECD 30 calls 100 SMS basket	USD	Ranking
Egypt	1.17	1
Tunisia	1.66	2
Ghana	2.24	3
Nigeria	2.25	4
Kenya	2.30	5
Tanzania	2.34	6
Ethiopia	3.03	7
Rwanda	3.04	8
Sudan	3.18	9
Mauritius	3.23	10
Sierra Leone	3.38	11
Guinea	3.76	12
South Africa	3.88	13
Gambia	4.19	14
Uganda	4.23	15
Namibia	4.64	16
Madagascar	4.86	17
Cape Verde	4.98	18
Liberia	5.00	19
Malawi	5.69	20
Mali	6.21	21
Botswana	6.25	22
Burundi	6.40	23
Libya	6.60	24
Cameroon	6.73	25
Burkina Faso	7.20	26
Zambia	7.64	27
Mozambique	7.91	28
Benin	8.08	29
Algeria	8.31	30
Morocco	8.32	31
Senegal	8.40	32
Niger	8.57	33
Lesotho	8.57	34
Togo	8.77	35
D.R Congo	8.80	36
Zimbabwe	8.95	37
Gabon	9.48	38
Mauritania	9.95	39
Comoros	10.09	40
Congo Brazzaville	10.40	41
Sao Tome and Principe	10.70	42
Cote d'Ivoire	10.78	43
Chad	11.15	44
Central African Republic	11.35	45
Swaziland	12.42	46
Seychelles	13.76	47
Angola	19.29	48

Table 18: 1GB mobile prepaid broadband per month	USD	Ranking
Egypt	1.25	1
Tunisia	2.04	2
Guinea	2.20	3
Tanzania	2.27	4
Ghana	2.34	5
Rwanda	2.43	6
Mozambique	2.71	7
Uganda	2.82	8
Nigeria	3.15	9
Senegal	3.26	10
Sudan	4.31	11
Madagascar	4.86	12
Cape Verde	4.88	13
Kenya	4.90	14
Liberia	5.00	15
Cameroon	5.02	16
Morocco	5.20	17
Burundi	5.34	18
Mauritius	5.37	19
Gambia	6.06	20
Namibia	6.35	21
Malawi	6.67	22
Central African Republic	6.70	23
Gabon	6.70	24
Niger	6.86	25
Ethiopia	7.25	26
Algeria	7.36	27
South Africa	7.67	28
Togo	7.71	29
Cote d'Ivoire	8.4	30
Benin	8.6	31
Burkina Faso	8.6	32
Zambia	8.7	33
Sao Tome and Principe	9.2	34
Lesotho	9.3	35
Libya	10.9	36
Comoros	11.1	37
Botswana	12.6	38
Mali	12.9	39
D.R Congo	13.0	40
Sierra Leone	13.4	41
Mauritania	16.6	42
Chad	16.7	43
Congo Brazzaville	16.7	44
Seychelles	18.1	45
Angola	22.7	46
Zimbabwe	30.0	47
Swaziland	35.3	48

Fixed line-Wired Services

Telecom Namibia is Namibia’s only national fixed-line operator and owns the only national fiber network for providing fixed services.⁸ All other licensees rely on its fiber network to varying extents and some resellers rely entirely on it.

Voice versus Data Revenues

Telecom Namibia faces declining voice revenues. While revenues from monthly rental increased and international voice only declined slightly, the main drop in voice revenues stems from declining domestic voice revenue. The reasons for declining fixed voice revenues around the world are the wider use of mobile phones and the use of VoIP applications such as Skype. Fixed-to-mobile and voice-to-data substitutions happen at the residential and business level. While fixed-lines are not necessarily cut by businesses, business communication traffic has been shifted to mobile and VoIP as well. This is an international trend also reflected in Namibia.

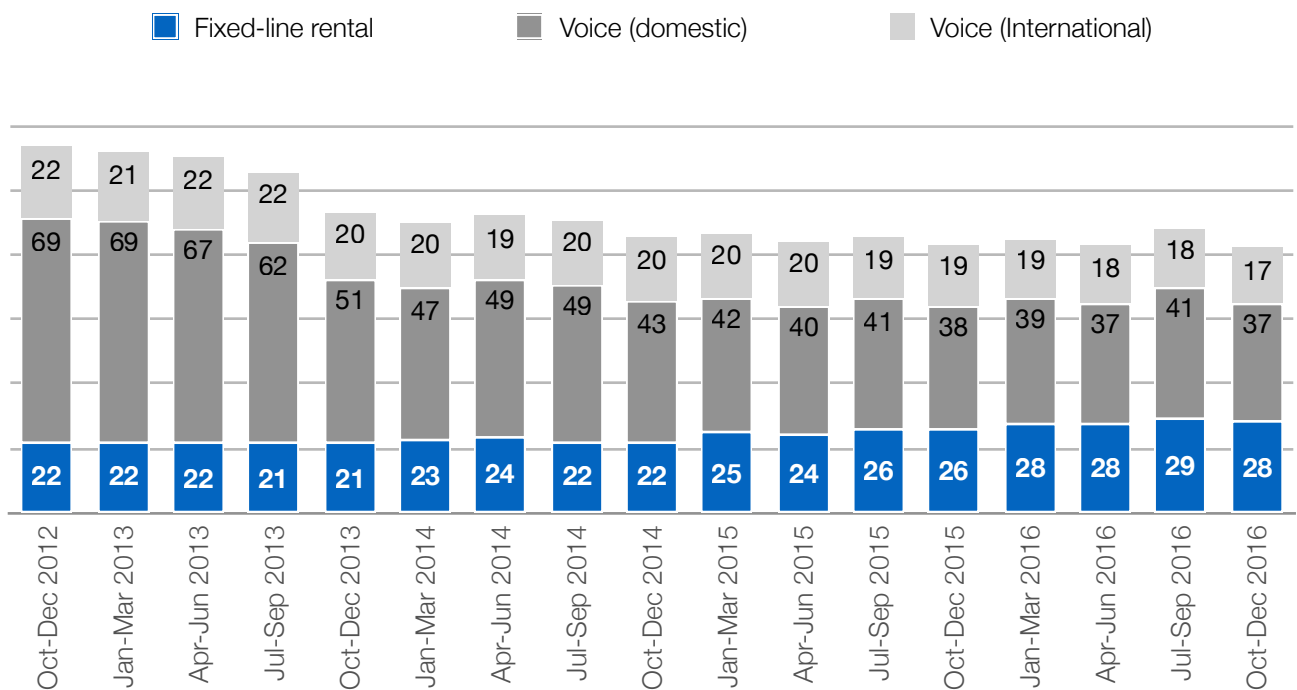


Figure 24: Telecom Namibia’s fixed voice revenues in N\$ million

Data revenues are on the increase overall and exceed voice revenues since 2012. Telecom Namibia earned twice as much with data than with fixed voice in 2016.

⁸ MTC also maintains a fiber network but only for own use. It does not provide fixed-line or leased line services.

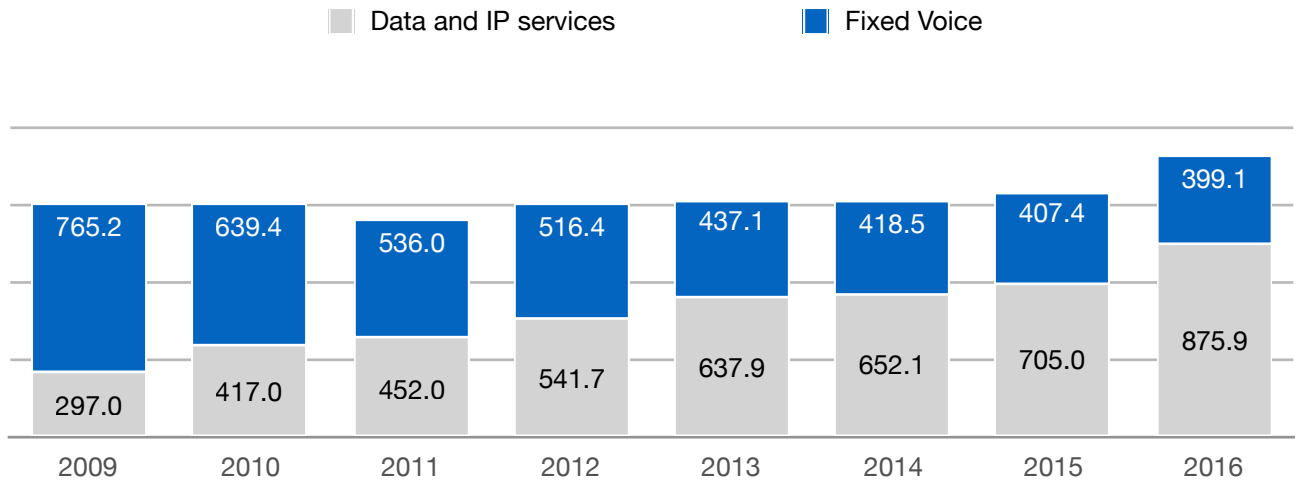


Figure 25: Telecom Namibia voice vs data revenues in N\$ million (source annual reports)

ADSL and Leased-Line Revenues

Revenue from ADSL subscriptions has doubled since 2012 and is more important than leased line revenues for Telecom Namibia since the 4th quarter of 2013. In the 3rd and 4th quarter of 2016 ADSL revenues were about twice as high as leased line revenues.

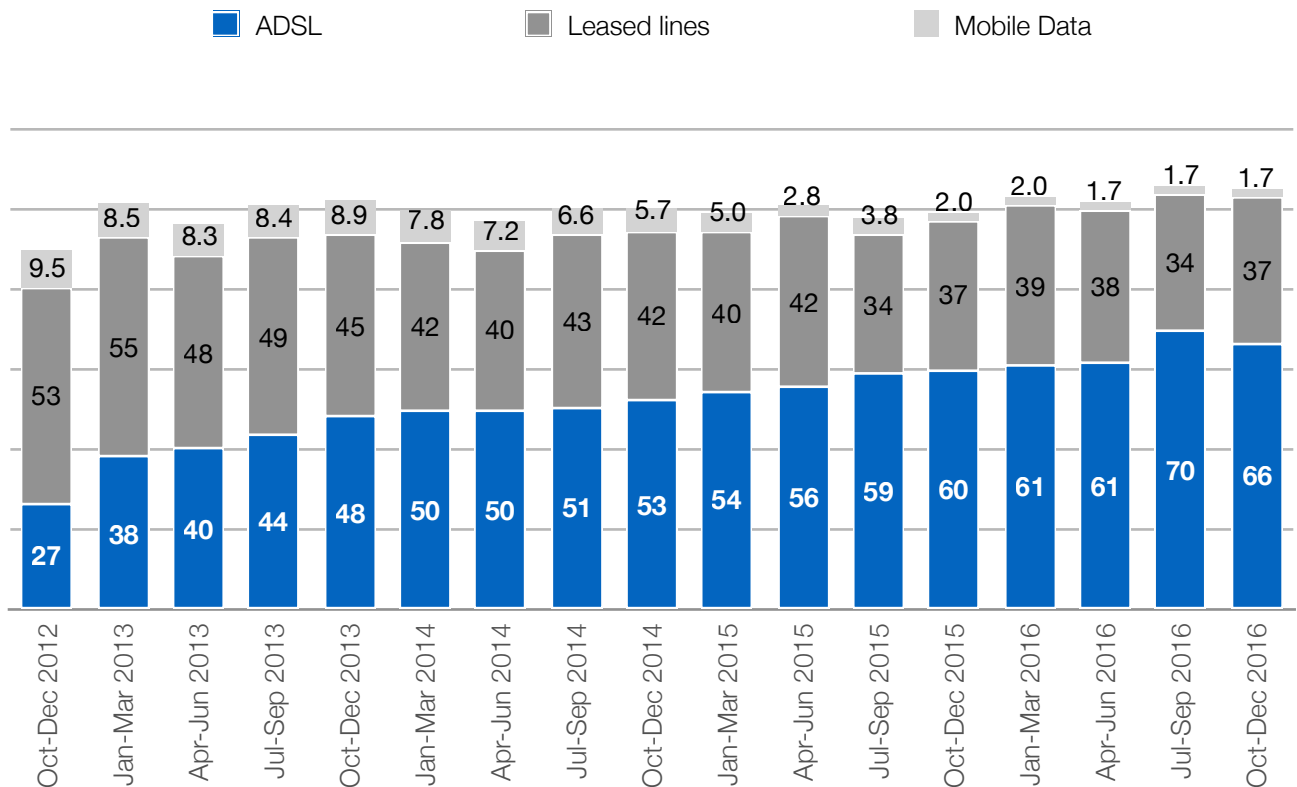


Figure 26: Telecom Namibia's ADSL and leased line revenues in N\$ million

Telecom Namibia offers ADSL and leased lines as a retail service to end-users and as a wholesale service to resellers such as Africa Online, MTN Business, SALT, Paratus and Bidvest. Africa Online is the only ISP with significant revenues from reselling Telecom Namibia's ADSL.

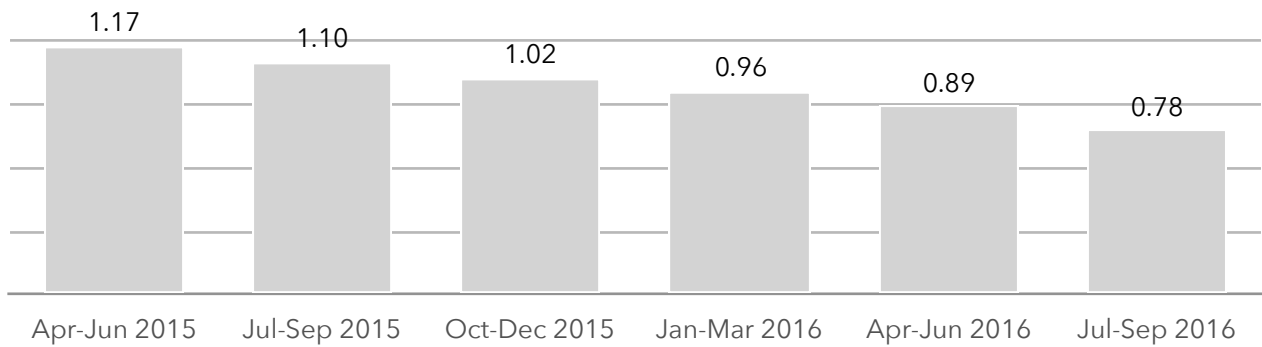


Figure 27: Africa Online's ADSL revenues in N\$ million

The leased line revenues of MTN Business and Paratus combined were higher than the retail leased line revenues of Telecom Namibia for the last three quarters. Effective resellers provide more of an opportunity than a threat to Telecom Namibia.

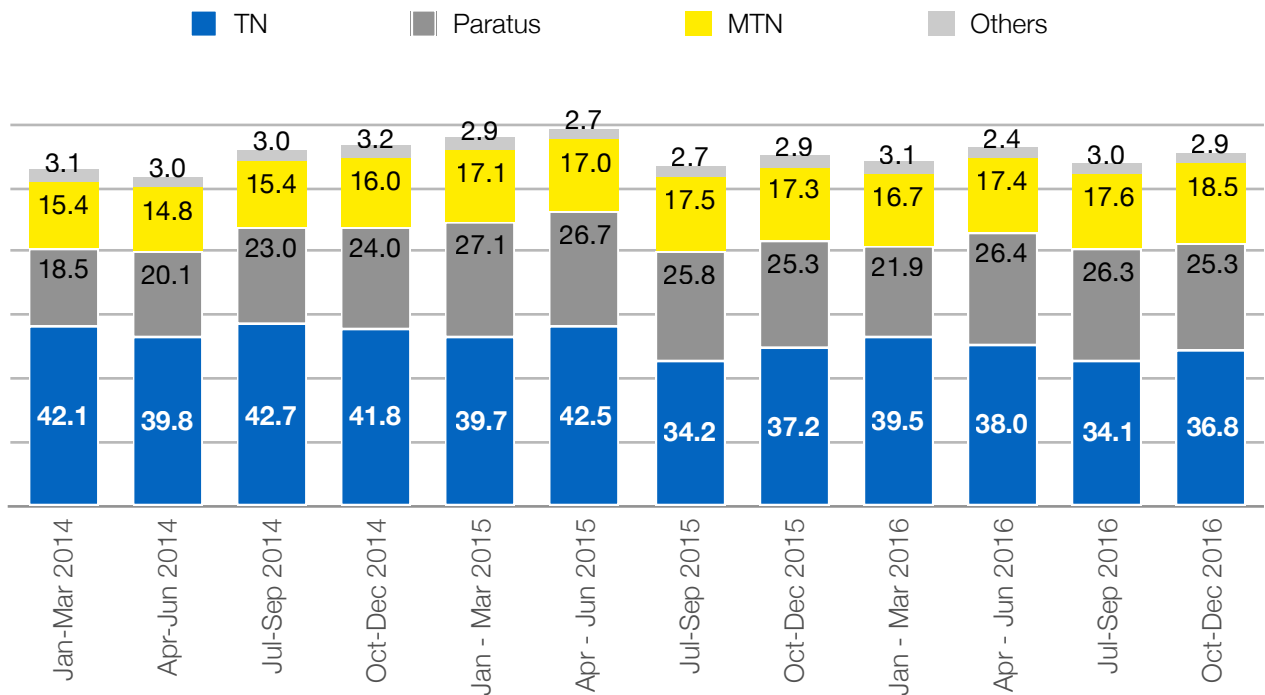


Figure 28: Leased line revenues in N\$ million

A wholesale only strategy may prove to be more profitable than competing in the retail market for leased lines. Another option could be to separate the wholesale business entirely from the retail business, as separate business units within the same group. Telkom South Africa announced such a move.⁹ It reduces regulatory burden and promises more efficiency for retail and wholesale operations. The wholesale company could be run based on open access principles thus fulfilling its public mandate as a 100% state owned enterprise.

⁹ http://www.techcentral.co.za/telkom-spins-off-wholesale-as-openserve/60510/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+co%2FUqJF+%28TechCentral%29

Fiber to the Home

Paratus has started laying fiber in Windhoek but still relies on Telecom Namibia for national and international connectivity. Fiber to the Home (FTTh) is mainly offered to new estates, where from the start fiber is laid instead of copper lines.

Conclusion

After the voice battle was lost to mobile in the last decade, faster data is becoming the new competitive and marketing tool nationally and internationally. To compete with 4G (LTE) Telecom Namibia needs to upgrade its ADSL offerings to VDSL2 or massively reduce prices for ADSL. An alternative could also be to replace all ADSL lines with 2Mbps leased line services (which can be delivered over existing copper lines), at a flat access price. The advantage of an E1 over ADSL lies in its synchronous nature, same upload and download speeds. FTTh could complement this service to new residential complexes and businesses.

It is of concern to CRAN that Telecom Namibia failed to gain a significant mobile market share. Telecom Namibia's voice revenues have been in continuous decline since 2009 and during the same period its data revenues have continuously increased. Telecom Namibia needs to focus its strengths on data and improve on issues such as speed, quality of service (QoS) and pricing to compete with mobile services to stay competitive in future.

Consumer complaints

The total number of complaints received by licensees in 2016 dropped to 69,518 from 79,946, but the cases that were referred to CRAN for not being resolved increased from 16 to 47.

Table 19: Consumer complaints received		2015	2016
Share of complaints received	Other licensees	0.4%	6.1%
	Telecom Namibia Limited	9.2%	7.9%
	Paratus Telecommunications (Pty) Ltd	10.9%	23.3%
	Mobile Telecommunications Limited	79.4%	62.7%
Total received		79946	69,518
Number of complaints not resolved after 14 days, which were subsequently submitted to CRAN		16	47

This may be due to consumers being more aware about CRAN's role in addressing consumer complaints.

Conclusion

Namibian has a factual mobile and an actual fixed-line monopoly, both majority state-owned. The key challenge for 2017 and 2018 will be to revert to the recipe of fair competition that led to the flourishing of Namibia's ICT sector between 2006 and 2012. Competition brought lower prices, faster and better services and innovative products. Namibia lost its leading role in Africa due to state driven consolidation and complacency of shareholders. Treating the ICT sector as a cash cow instead of a growth engine only works in the short term.

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