



CRAN

Communications Regulatory Authority of Namibia

Telecommunication Sector Market Report

October 2021

Table of Contents

Introduction	1
Financial Performance of the ICT Sector	1
Telecom Namibia Group	3
Mobile Telecommunications Limited (MTC)	6
Paratus Telecommunications	7
Conclusion	7
Subscribers	8
Revenue trends	10
Traffic	12
Network Infrastructure	13
International Bandwidth	13
Mobile Population Coverage	14
Quality of Service	16
Mobile Price Benchmarking	18
Conclusion	23

Introduction

The review assesses developments in the telecommunications sectors for 2020. It 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 2021. The first chapter analyses the financial performance of licensees based on audited financial statements (AFS) submitted to CRAN. The subsequent chapters analyse key performance indicators for subscribers, traffic, network infrastructure and pricing.

Financial Performance of the ICT Sector

The main trend since 2014 has been the nationalisation of the ICT sector. Telecom Namibia took over the privately owned Leo (Powercom) in 2014. In 2018, NPTH increased its shareholding in MTC to 100%. Both MTC and Telecom Namibia are 100% owned by NPTH, which itself is 100% owned by the state. The result has been a shrinking ICT sector. Revenues, assets and shareholder equity all declined in US dollar (USD) terms, only profits increased, which is consistent with a state monopoly (see Table 1).

Table 1: Aggregated financials from the ICT sector based on AFS

		2012	2013	2014	2015	2016	2017	2018	2019	2020	Change since 2012
Revenue	NAD million	2,840	3,371	3,770	4,156	4,475	4,499	4,821	4,897	5,116	
	YoY %		19%	12%	10%	8%	1%	7%	2%	4%	
	USD million	345	349	347	325	304	338	364	339	311	-10%
Net Profit	NAD million	409	346	-35	419	552	777	787	837	853	
	USD million	50	36	-3	33	38	58	59	58	52	4%
Assets	NAD million	4,339	4,798	4,762	4,817	4,973	4,856	5,305	5,555	6,577	
	USD million	528	497	438	377	338	365	400	384	399	-24%
Liabilities	NAD million	1,954	2,459	2,924	2,811	3,571	2,965	3,321	3,191	4,271	
Shareholder Equity	NAD million	2,385	2,338	1,837	2,006	1,402	1,891	1,984	2,364	2,306	
	YoY %		-2%	-21%	9%	-30%	35%	5%	19%	-2%	
	USD million	290	242	169	157	95	142	150	164	140	-52%
Profit Margin		14%	10%	-1%	10%	12%	17%	16%	17%	17%	
Return on Equity		17%	15%	-2%	21%	39%	41%	40%	35%	37%	
USD exchange rate		8.2	9.7	10.9	12.8	14.7	13.3	13.2	14.5	16.5	

The growth of Namibia's ICT sector has slowed down since the takeover by the state in nominal terms and declined in USD terms. Annual revenue growth declined from 19% to 2% in 2019 and 4% in 2020. However, expressed in USD currency, it declined by 10% between 2012 and 2020. The total shareholder's equity in nominal terms has been stagnant since 2012, i.e., it has declined in real terms. In USD terms, the industry shareholder's equity declined from USD

million 290 to just USD million 140 since 2012, see Figure 1.¹ Total USD assets also declined, while net profits increased slightly. This is to be expected as the result of the nationalisation of the ICT sector.

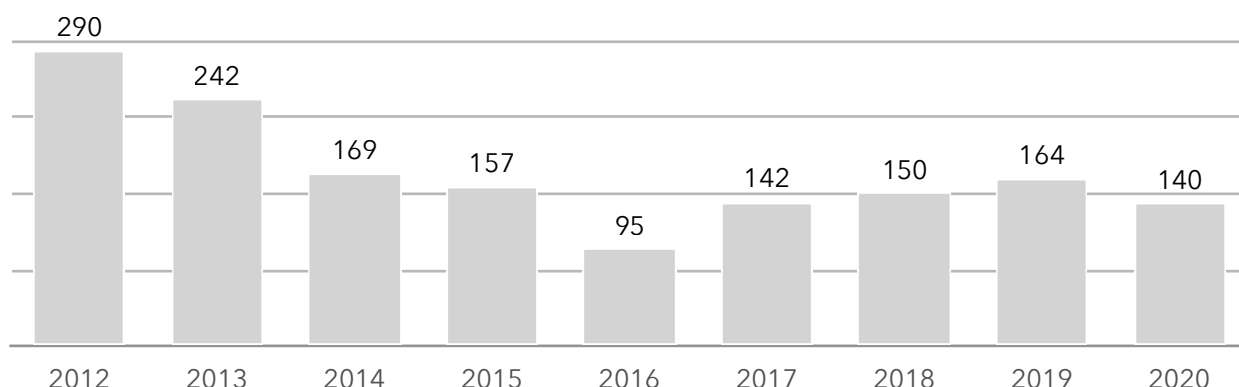


Figure 1: Total shareholder's equity of the ICT sector in USD million

The state controls 92% of ICT sector assets and 82.5% of ICT sector revenues. The private sector, while owning 8.2% of the assets, was responsible for 17.4% of the revenues in 2020. This is partly due to the fact that most private companies provide services by leasing infrastructure from Telecom Namibia and Nampower, thus requiring fewer assets themselves. The revenue share of the private sector has increased from 10.9% in 2016 to 17.4% in 2020 (Figures 2 and 3).

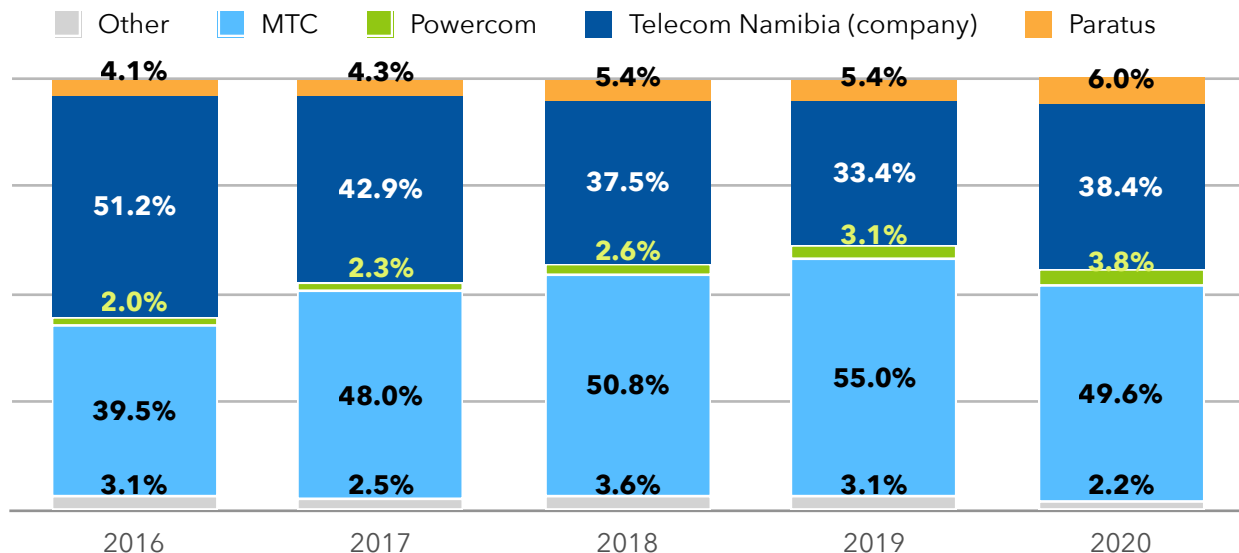


Figure 2: Share in assets

¹ FX from Netbank: https://www.nedbank.co.za/content/dam/nedbank/site-assets/AboutUs/Economics_Unit/Forecast_and_data/Daily_Rates/Annual_Average_Exchange_Rates.pdf

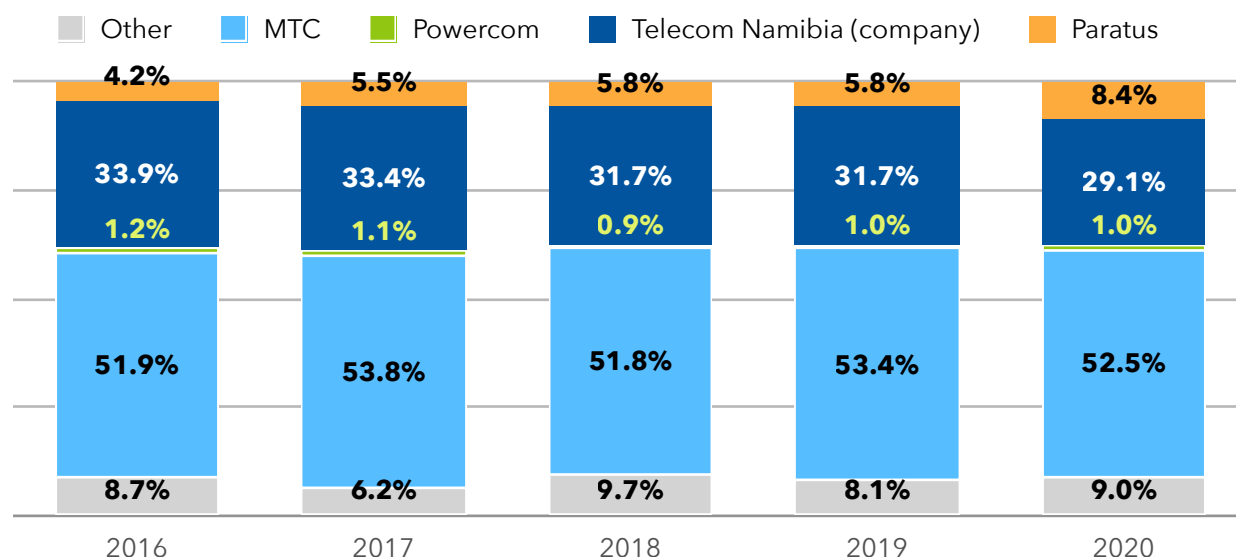


Figure 3: Share in revenues

Telecom Namibia Group

A stagnant Telecom Namibia falls further behind MTC at the expense of shareholders.

Telecom Namibia's share in ICT sector revenues declined from 43% in 2012 to 29% in 2020 despite taking over the only privately owned national mobile network operator LEO in 2014. Its shareholder's equity continues to decline, except in the year 2015, where it received a cash injection from the state. The massive value destruction is evident when looking at the shareholder's equity expressed in USD, which fell from USD million 152 in 2012 to only USD million 24 in 2020 (Table 2). It generated 1% of profits with 38% of the ICT sector assets in 2020. Telecom Namibia is also already highly leveraged with debt five times higher than equity.

Table 2: Telecom Namibia's financials based on AFS (company)

		2012	2013	2014	2015	2016	2017	2018	2019	2020
Revenue	NAD million	1,223	1,310	1,353	1,420	1,518	1,503	1,530	1,554	1,487
Net Profit	NAD million	57	-87	-556	-84	-41	9	-51	-27	8
Assets	NAD million	2,629	2,875	2,710	2,651	2,546	2,085	1,992	1,853	2,528
Liabilities	NAD million	1,376	1,744	2,134	1,759	1,695	1,245	1,584	1,465	2,129
Shareholder Equity	NAD million	1,252	1,132	576	892	851	840	408	388	399
	YoY %		-10%	-49%	55%	-5%	-1%	-51%	-5%	3%
	USD million	152	117	53	70	58	63	31	27	24
Return on Equity	%	5%	-8%	-96%	-9%	-5%	1%	-13%	-7%	2%
Financial leverage	#	1.1	1.5	3.7	2.0	2.0	1.5	3.9	3.8	5.3
USD exchange rate		8.2	9.7	10.9	12.8	14.7	13.3	13.2	14.5	16.5

Telecom Namibia, which owns 100% of Powercom (previously Leo) would now have to pay USD million 25 if it were to sell Powercom. It had negative shareholder equity since 2016 but managed to reduce its negative equity from USD -38.3 to -25.2 between 2016 and 2020.

Powercom's finance costs are very low, below half a percent, because it has an unsecured and interest free loan from its parent company. Powercom's asset value increased from USD million 6.9 to 15.1 during the period 2016 to 2020.

Table 3: Powercom's financials based on AFS

NAD million		2016	2017	2018	2019	2020
Revenue	NAD million	54.1	51.4	42.7	48.7	51.8
	USD million	3.7	3.9	3.2	3.4	3.1
Net Profit	NAD million	14.5	41.5	27.0	40.5	38.7
Assets	NAD million	101.2	110.7	138.9	172.2	248.8
	USD million	6.9	8.3	10.5	11.9	15.1
Liabilities	NAD million	664.1	632.1	633.3	626.1	663.0
	USD million	45.1	47.5	47.8	43.3	40.3
Finance Cost	NAD million	2.7	1.1	0.012	0.018	3.0
Implied interest rate	%	0.413%	0.171%	0.002%	0.003%	0.447%
Shareholder's Equity	NAD million	-562.9	-521.4	-494.4	-453.9	-414.2
	USD million	-38.3	-39.1	-37.3	-31.4	-25.2
Profit Margin	%	27%	81%	63%	83%	75%
USD exchange rate		14.7	13.3	13.2	14.5	16.5

At a group level, shareholders equity fell from USD million 82 to USD million 29 (Table 4).

Table 4: Telecom Namibia group's financials based on AFS

		2012	2013	2014	2015	2016	2017	2018	2019	2020
Revenue	NAD million	1,223	1,312	1,378	1,431	1,532	1,518	1,540	1,574	1,512
Net profit/loss after tax	NAD million	57	-168	-205	-54	-26	247	-26	13	47
Total assets	NAD million	2,051	2,370	2,514	2,435	2,309	2,081	2,012	1,904	2,630
Total liabilities	NAD million	1,376	1,896	2,246	1,823	1,724	1,266	1,603	1,476	2,152
Shareholder's Equity	NAD million	675	474	268	612	585	815	409	428	478
	YoY growth		-29.8%	-43.3%	128.0%	-4.4%	39.3%	-49.8%	4.7%	11.5%
	USD million	82	49	25	48	40	61	31	30	29
Return on Equity		8.4%	-35.4%	-76.5%	-8.8%	-4.5%	30.3%	-6.3%	3.0%	9.8%
Financial Leverage		2.0	4.0	8.4	3.0	2.9	1.6	3.9	3.4	4.5
USD exchange rate		8.2	9.7	10.9	12.8	14.7	13.3	13.2	14.5	16.5
Source:		Annual reports, 2012-20								

Telecom Namibia has not managed to continue the growth in revenues experienced in 2016 and revenues declined in 2017. Telecom, however, experienced the first positive return on equity and a net profit in five years in 2017. At the same time, liabilities and assets decreased, effectively shrinking Telecom. Table 4 displays the addition to Property, Plant & Equipment for Telecom Group. It declined in 2014, 2015 and 2016 and nothing was invested in 2017.

Telecom may be able to realise profits again if it can gain efficiency and focus on growing revenue streams such as wholesale prearranged connectivity in the form of leased lines, ADSL, FTTx and metro ethernet.

Table 5: Telecom Namibia's Group Revenue Segmentation

		2012	2013	2014	2015	2016	2017	2018	2019	2020
Mobile	N\$ million	45	69	160	171	108	106	138	241	252
	YoY growth		55%	132%	6%	-37%	-3%	31%	75%	4%
Fixed voice revenues incl. interconnection revenues	N\$ million	516	437	419	407	399	348	337	326	289
	YoY growth		-15%	-4%	-3%	-2%	-13%	-3%	-3%	-11%
Data and IP services revenues	N\$ million	542	638	652	705	876	905	913	824	836
	YoY growth		18%	2%	8%	24%	3%	1%	-10%	1%
Source:		Annual reports, 2012-2020								

Fixed-voice remains a cash cow for Telecom. The profit margin for fixed voice services was 88% followed by data services with 81% and mobile services 77%. These segments mask, however, the main problem that Telecom faces in becoming a profitable operator: excessive administrative expenses, which make up half of its revenue (Figure 4). If this is not contained, Telecom will never be able to compete effectively against other operators in the Namibian market.

Table 6: Telecom Namibia's Group Revenue and profit segmentation

	2019			2020		
	Segment revenue N\$ million	Segment Profit N\$ million	Profit as share of revenues	Segment revenue N\$ million	Segment Profit N\$ million	Profit as share of revenues
Mobile	241	185	77%	252	193	77%
Fixed voice revenues incl. interconnection revenues	326	276	85%	289	255	88%
Data and IP services revenues	824	687	83%	836	673	81%
Source:	Annual report, 2020					

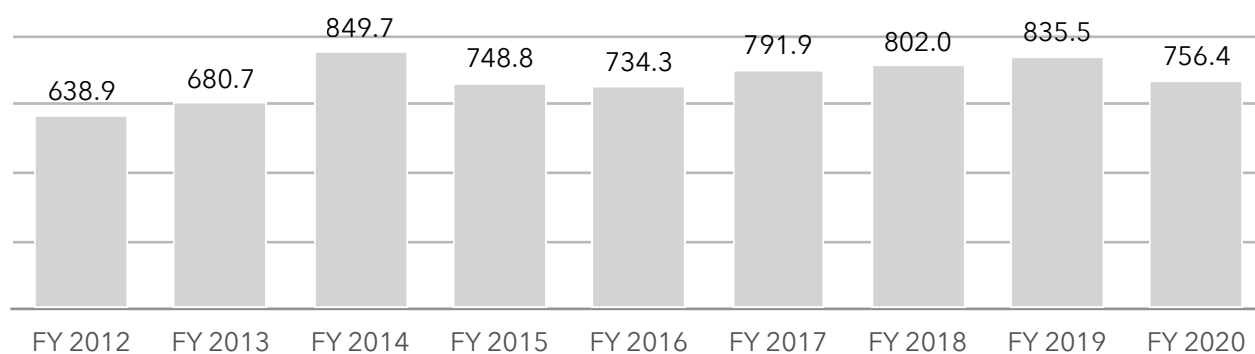


Figure 4: Telecom's administrative expenses in million N\$ (company)

Mobile Telecommunications Limited (MTC)

MTC's financial performance is solid and under-leveraged. MTC is mostly equity financed. In 2020, shareholders equity was double its total liabilities (financial leverage of 0.5). MTC has the potential to increase profitability by replacing equity through debt. It also means that it could use debt to expand its services, for example, by rolling out fast mobile broadband and fibre to the home (FTTh). Its return on equity stood at 36%, repaying shareholder's investment within three years. In USD terms, its revenues decreased and its profits increased. Its profit margin increased from 22% in 2012 to 29% in 2020. MTC also has a phenomenal EBITDA margin of above 50%, reaching a high of 60% in 2018.

Table 7: MTC's financials based on AFS

NAD million		2012	2013	2014	2015	2016	2017	2018	2019	2020
Revenue	NAD million	1,617	1,832	2,082	2,251	2,324	2,421	2,498	2,614	2,683
	USD Million	197	190	192	176	158	182	189	181	163
Net Profit	NAD million	353	425	505	491	579	712	802	797	772
	USD Million	43	44	46	38	39	53	61	55	47
Assets	NAD million	1,711	1,822	1,920	1,849	1,967	2,331	2,694	3,058	3,263
	YoY %		7%	5%	-4%	6%	19%	16%	13%	7%
	USD Million	208	189	177	145	134	175	203	212	198
Liabilities	NAD million	578	649	704	663	682	824	754	748	1,137
Shareholder Equity	NAD million	1,132	1,173	1,216	1,186	1,284	1,507	1,940	2,310	2,126
	YoY %		4%	4%	-3%	8%	17%	29%	19%	-8%
	USD Million	138	121	112	93	87	113	146	160	129
Profit Margin	%	22%	23%	24%	22%	25%	29%	32%	30%	29%
Return on Equity	%	31%	36%	42%	41%	45%	47%	41%	35%	36%
Financial leverage	#	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.5
EBITDA margin	%				52.4%	56.2%	57.9%	59.9%	51.5%	52.0%
USD exchange rate		8.2	9.7	10.9	12.8	14.7	13.3	13.2	14.5	16.5

MTC is run as a cash cow and there is no investment in innovative new income streams.

This is reflected in its investment pattern. Additions to property, plant and equipment (PPE) dropped from 59% to 41% of net profits between 2012 and 2020. Additions to network equipment dropped from 51% to merely 16% of net profits.

Table 8: MTC's CAPEX

		2012	2013	2014	2015	2016	2017	2018	2019	2020
Net profit after tax	N\$ million	353	425	505	491	579	712	802	797	772
Addition to Property, Plant & Equipment	N\$ million	208	222	161	109	184	204	290	399	315
	% of after tax profit	59%	52%	32%	22%	32%	29%	36%	50%	41%
Addition to Network Equipment	N\$ million	179	101	109	91	148	164	176	161	121
	% of after tax profit	51%	24%	21%	19%	26%	23%	22%	20%	16%
Source:	MTC annual reports, 2012-2020									

Paratus Telecommunications

Paratus accelerated its growth and service offerings. Paratus has increased its shareholder's capital from USD million 1.1 to 10.3 between 2015 and 2020 by raising capital on the Namibian Stock Exchange (NSX). Revenues increased each year with a notable increase in 2020. Its return on equity and profit margins are still low, which can be expected from a rapidly expanding company. While Paratus is growing rapidly, it is doing so from a low base. In 2020, despite a tenfold increase in shareholder's equity and a quadrupling of assets, it still accounted only for 8% of sector revenues and 6% of sector assets. While the growth is encouraging it is unlikely that Paratus will be able to compete on its own with MTC or Telecom or provide national wireless end-user access in the near future.

Table 9: Paratus's financials based on AFS

NAD million		2015	2016	2017	2018	2019	2020
Revenue	NAD million	140	189	246	281	284	432
	YoY		35%	30%	15%	1%	52%
Net Profit	NAD million	13	5	10	1	10	26
Assets	NAD million	83	206	207	289	302	394
	YoY		147%	1%	39%	5%	30%
	USD Million	7	14	16	22	21	24
Liabilities	NAD million	69	187	178	201	205	224
Shareholder Equity	NAD million	13.9	18.5	28.5	87.3	97.3	169.4
	YoY		33%	54%	206%	11%	74%
	USD Million	1.1	1.3	2.1	6.6	6.7	10.3
Profit Margin	%	9%	2%	4%	0%	4%	6%
Return on Equity	%	92%	25%	35%	1%	10%	15%
Revenue sector	% of sector	3%	4%	5%	6%	6%	8%
Assets	% of sector	2%	4%	4%	5%	5%	6%
USD exchange rate		12.8	14.7	13.3	13.2	14.5	16.5

Conclusion

Namibia is back to the pre-2006 state of affairs with all national operators fully owned and managed by the state. This has led to a contraction of the sector in USD terms. ICT sector revenues, shareholder's equity and assets declined between 2012 and 2020 in USD terms while net profits increased slightly. While this is to be expected as the result of the nationalisation of the ICT sector, it is not in the best interests of the principal shareholder (the state) or Namibia as a whole.

Subscribers

Landline subscribers continue to decline and xDSL connections continue to increase. Out of 70,000 xDSL connections, only 2,500 were at a speed of 10 Mbps or above. Another 1,800 connections with fibre to the home (FTTh) could also be considered suitable broadband. In total, only 4,300 households had a suitable wired broadband connection in 2020. One encouraging factor is the transition from 2 Mbps speeds to speeds of 2-10Mbps xDSL subscriptions.

Table 10: Fixed subscribers

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Landlines	171,249	183,532	186,508	182,507	187,812	193,026	154,816	142,160	141,334
VoIP	0	7	66	127	3,399	3,167	3,901	4,278	4,144
Terrestrial fixed wireless	854	741	729	920	1,020	850	800	6,538	9,229
Satellite	266	265	318	354	354	373	369	356	428
FTTh			11	12	158	252	498	829	1,762
Other fixed broadband	139	156	72	38	57	170	170	259	1,007
xDSL up to 2Mbps	29,795	29,776	36,041	39,660	44,259	48,602	25,674	3,988	4,057
xDSL 2 to 10Mbps	2,005	4,014	5,087	6,307	8,706	31,489	31,586	55,314	63,696
xDSL 10Mbps or more	56	57	84	224	416	1,085	1,435	2,090	2,494
Total xDSL	31,856	33,847	41,212	46,191	53,381	81,176	58,695	61,392	70,247
Total 10Mbps or more	56	57	95	236	574	1,337	1,933	2,919	4,256

In comparison, nearly 1,8 million mobile SIM cards use data in Namibia, or 61% of active SIM cards are used to access the Internet. Namibia's reliance on mobile for Internet access is a result of many factors. The ability to pre-pay for Internet access and the fact that smartphones are easier and cheaper than PCs and laptops are most likely the most important factors. High prices are also a major obstacle. MTC's mobile subscriber market share for postpaid is 79% and for prepaid 90%. Postpaid subscribers grew from 150,000 in 2013 to 196,000 in 2020. Prepaid grew from 2.3 million to 2.7 million active SIM cards.

Table 11: Mobile subscriber numbers in 1000s

			2013 Dec	2014 Dec	2015 Dec	2016 Dec	2017 Dec	2018 Dec	2019 Dec	2020 Dec
Postpaid Active SIM cards	MTC	1000	132	147	152	159	161	159	155	154
		Market share %	88%	87%	85%	83%	82%	82%	80%	79%
	TN Mobile	1000	18	21	28	31	35	34	39	41
		Market share %	12%	13%	15%	17%	18%	18%	20%	21%
	Total	1000	150	168	180	191	195	193	194	196
		YoY %		12.1%	6.9%	6.0%	2.3%	-0.9%	0.6%	0.7%
Prepaid Active SIM	MTC	1000	2,248	2,427	2,290	2,314	2,329	2,372	2,420	2,440
		Market share %	97%	97%	97%	94%	94%	92%	92%	90%
	TN	1000	58	76	80	156	156	194	208	262

			2013 Dec	2014 Dec	2015 Dec	2016 Dec	2017 Dec	2018 Dec	2019 Dec	2020 Dec
Active SIM cards	Mobile	Market share %	3%	3%	3%	6%	6%	8%	8%	10%
	Total	1000	2,306	2,503	2,370	2,469	2,485	2,566	2,628	2,702
		YoY %		8.5%	-5.3%	4.2%	0.6%	3.3%	2.4%	2.8%
Combined Active SIM cards	MTC	1000	2,380	2,574	2,443	2,473	2,489	2,531	2,576	2,594
		Market share %	97%	96%	96%	93%	93%	92%	91%	90%
	TN Mobile	1000	76	97	107	187	191	228	247	303
		Market share %	3%	4%	4%	7%	7%	8%	9%	10%
	Total	1000	2,456	2,671	2,550	2,660	2,680	2,759	2,823	2,897
		YoY %		8.8%	-4.5%	4.3%	0.8%	3.0%	2.3%	2.6%
Mobile broadband	1000	788	802	1,444	1,611	1,413	1,670	1,652	1,765	
	YoY %		1.8%	79.9%	11.6%	-12.3%	18.2%	-1.1%	6.9%	
	% of total SIM		32%	30%	57%	61%	53%	61%	59%	61%

Revenue trends

Mobile data revenues, as a percent share of voice revenues, continues to increase. At the end of 2018, data revenues exceeded voice revenues. By 2020, 60% of mobile revenues were derived from data. Mobile revenues increased from USD million 95 to USD million 140 between 2012 and 2020. However, ICT sector revenues in USD declined in 2019 and 2020, and even data revenue growth slowed.

Table 12: Mobile service revenues (Source: CRAN portal)

			2012	2013	2014	2015	2016	2017	2018	2019	2020
Voice	Domestic	NAD million	575.7	1,193.1	1,270.9	1,066.0	1,094.0	1,127.1	951.3	767.3	691.2
	International	NAD million	39.1	81.5	98.6	91.9	80.0	69.6	60.4	56.7	53.9
SMS	Domestic	NAD million	73.8	164.3	185.1	229.2	240.8	234.9	198.0	186.5	174.1
	International	NAD million	8.1	15.0	9.8	4.1	3.5	1.9	1.2	1.0	0.9
Mobile Data	NAD million		85.0	269.6	387.3	597.7	682.3	760.4	1,012.1	1,155.7	1,384.3
	YoY			217.2%	43.7%	54.3%	14.2%	11.4%	33.1%	14.2%	19.8%
	USD million		10.3	27.9	35.7	46.8	46.4	57.1	76.4	79.9	84.1
	YoY			170.0%	27.8%	31.2%	-0.9%	23.1%	33.9%	4.6%	5.2%
Total Service Revenues	NAD million		781.7	1723.6	1951.8	1988.8	2100.5	2193.8	2222.9	2167.2	2304.4
	YoY			120.5%	13.2%	1.9%	5.6%	4.4%	1.3%	-2.5%	6.3%
	USD million		95.1	178.4	179.7	155.7	142.8	164.7	167.8	149.9	140.0
	YoY			87.7%	0.7%	-13.4%	-8.3%	15.4%	1.9%	-10.7%	-6.6%
Mobile Data as % of service revenues			10.9%	15.6%	19.8%	30.1%	32.5%	34.7%	45.5%	53.3%	60.1%
USD FX			8.2	9.7	10.9	12.8	14.7	13.3	13.2	14.5	16.5

Fixed data revenues are on the increase from USD million 17 to USD million 115 between 2012 and 2020. Growth here has also slowed between 2019 and 2020. Revenue from ADSL subscriptions declined in USD terms since 2018, despite subscriber numbers increasing, indicating that ADSL pricing has lowered in response to competition through FTTH and mobile broadband. Telecom Namibia has upgraded all its lower speed connections to 2Mbps lines to provide faster speed at flat access prices and to adhere to the National Broadband Policy.

Table 13 Data revenues

		2012	2013	2014	2015	2016	2017	2018	2019	2020
ADSL	NAD million	26.8	170.3	202.8	232.4	262.8	274.0	271.7	266.9	275.4
	YoY		536.3%	19.1%	14.6%	13.1%	4.3%	-0.8%	-1.8%	3.2%
	USD million	3.3	17.6	18.7	18.2	17.9	20.6	20.5	18.5	16.7
FTTX	NAD million				0.9	16.8	59.1	80.8	95.8	109.0
Other fixed	NAD million	27.7	108.5	145.8	171.4	169.6	115.7	125.1	117.0	130.1
Mobile	NAD million	85.0	269.6	387.3	597.7	682.3	760.4	1012.1	1155.7	1384.3
Total	NAD million	139.4	548.4	735.9	1002.3	1131.4	1209.2	1489.8	1635.5	1898.8
	USD FX	8.2	9.7	10.9	12.8	14.7	13.3	13.2	14.5	16.5

		2012	2013	2014	2015	2016	2017	2018	2019	2020
Total	USD million	17.0	56.8	67.8	78.5	76.9	90.8	112.5	113.1	115.3
	YoY		234.7%	19.3%	15.8%	-2.0%	18.0%	23.9%	0.6%	1.9%
Mobile data as % of total	%	61.0%	49.2%	52.6%	59.6%	60.3%	62.9%	67.9%	70.7%	72.9%

Landline revenues continue to decline. Telecom Namibia, as Namibia’s only national fixed-line operator, faces declining voice revenues, which is a global trend due to the wider use of mobile phones and the use of VoIP applications such as Skype, WhatsApp and FaceTime. Fixed-to-mobile and voice-to-data substitutions happen at the residential and business level. While landlines are not necessarily cut by businesses, business communication traffic has shifted to mobile and VoIP. This is an international trend also reflected in Namibia.

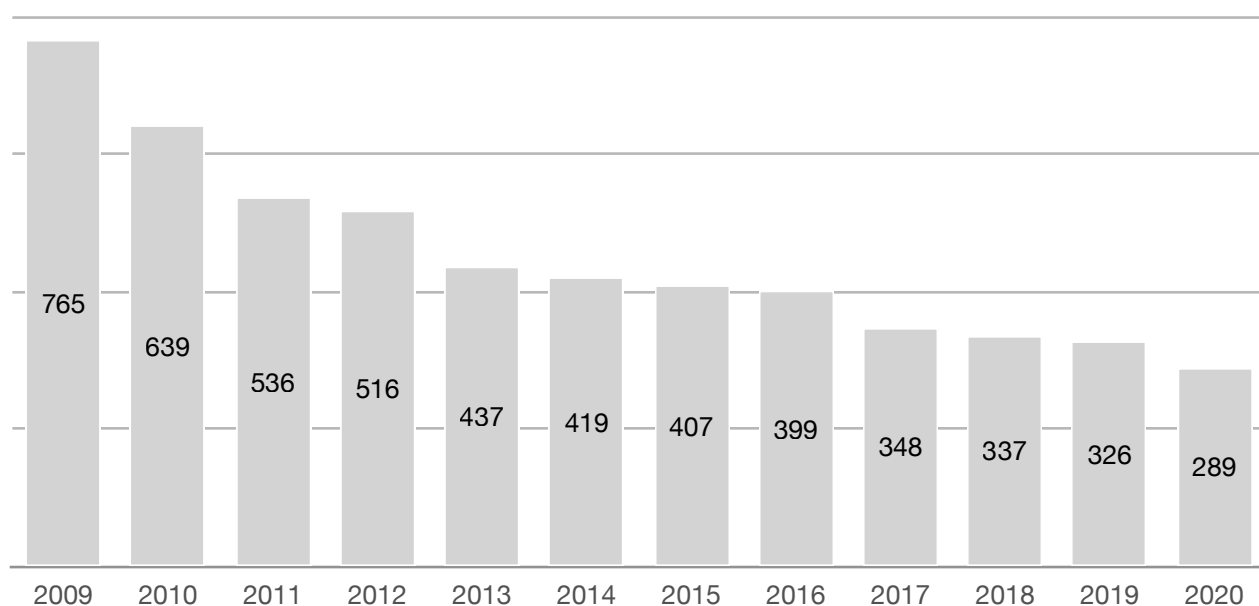


Figure 5: Telecom Namibia fixed voice revenues in N\$ million (source annual reports)

Traffic

MTC's market share in terms of outgoing traffic remains at 98% for voice and close to 100% for SMS. Mobile voice use increased in 2020 compared to 2019 while SMS use remained stable.

Table 14: Mobile domestic incoming and outgoing minutes in million

	Outgoing minutes (million)			MTC's Share	Outgoing SMS (million)			MTC's Share
	MTC	TN	Combined		MTC	TN	Combined	
2019_Q1	1,368	30	1,398	97.9%	2,396	8.0	2,404	99.67%
2019_Q2	1,456	20	1,476	98.6%	2,449	6.0	2,455	99.75%
2019_Q3	1,585	26	1,610	98.4%	2,401	7.48	2,409	99.69%
2019_Q4	1,631	26	1,657	98.4%	2,541	0.86	2,542	99.97%
2020_Q1	1,570	34	1,604	97.9%	2,507	0.86	2,508	99.97%
2020_Q2	1,876	38	1,914	98.0%	2,651	0.89	2,652	99.97%
2020_Q3	2,003	25	2,028	98.8%	2,571	0.83	2,572	99.97%
2020_Q4	1,976	36	2,012	98.2%	2,449	1.00	2,450	99.96%
2021_Q1	1,936	36	1,972	98.2%	2,386	1.04	2,387	99.96%
2021_Q2	2,005	41	2,045	98.0%	2,437	1.12	2,438	99.95%

The trend for landline voice has been declining for the past five years. Landline traffic to mobile dropped from 69 million to 61 million minutes and traffic between landlines from 103 million to 45 million minutes (Table 15). International traffic also more than halved during that period.

Table 15: Fixed incoming and outgoing minutes in million

		2015	2016	2017	2018	2019	2020
Outgoing minutes landline to mobile	million	68.7	66.8	63.9	66.0	64.6	60.7
YoY	%		-3%	-4%	3%	-2%	-6%
Outgoing minutes landline to landline	million	103.3	93.7	80.7	67.8	58.7	45.0
YoY	%		-9%	-14%	-16%	-13%	-23%

Table 16: Fixed and mobile International incoming and outgoing minutes in million

		2015	2016	2017	2018	2019	2020
International outgoing million minutes	from mobile	29.0	22.7	20.2	18.8	16.9	12.8
	from landline	31.5	28.8	26.0	20.8	14.8	9.5
	total	60.5	51.5	46.1	39.7	31.7	22.3
	YoY		-15%	-10%	-14%	-20%	-30%
International incoming million minutes	to mobile	50.8	47.2	39.6	35.5	37.8	32.2
	to landline	33.2	21.8	19.6	17.2	9.8	5.3
	total	84.0	69.0	59.2	52.7	47.5	37.5
	YoY		-18%	-14%	-11%	-10%	-21%

Network Infrastructure

International Bandwidth

Namibia's first mile connectivity is sufficient and can be expanded with increasing demand. Namibia's current per capita International bandwidth usage is half that of South Africa and Mauritius and similar to Botswana's. While Namibia has a submarine cable landing at its shores, capacity utilised by Namibian operators for their customers falls short of its Southern African neighbours. Botswana does not have a submarine landing station and still has similar connectivity to Namibia, as per Table 17. In terms of data connectivity, Telecom Namibia is at an advantage, due to its national fiber network and multiple international gateways (Table 18).

Table 17: Used international bandwidth (Gbps)

	2015	2016	2017	2018	2019	2020	Population million	2020 kbps per capita
Mozambique	62	85	132	150	165	189	29.5	6.4
Tanzania	98	134	198	251	336	376	56.3	6
Zambia	33	42	86	125	182	394	17.4	10.5
Botswana	15	23	60	54	69	100	2.3	30.6
Namibia	19	27	42	61	84	115	2.5	34.3
South Africa	541	816	1,777	3,187	4,142	7,944	57.8	71.7
Mauritius	41	53	68	85	109	163	1.3	86.1
Malaysia	2,025	3,386	4,957	8,878	11,320	14,865	31.5	359
Source	Telegeography, 2020, Population data for 2018 from WDI							

Table 18: Total international downlink bandwidth in Gbit/s

	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020
MTC	1.5	2.6	5.1	3.7	5.2	15.3	15.3	20.0	20.0
Telecom Namibia	4.1	10.3	8.2	17.0	28	50.5	88.0	88.5	171.5

Mobile Population Coverage

MTC and Telecom Namibia have extensive network coverage in all of Namibia's regions.

Both MTC and Telecom are national mobile broadband operators, covering all of Namibia's regions, while MTC clearly has a larger footprint. Population coverage for Namibia is 89% for 3G and 79% for 4G, which is low compared to South Africa and even the Southern African averages.

Table 19: Population coverage based on HRSL² population mapping

	3G	4G	Source
Namibia	89%	79%	CRAN September 2021
South Africa	98%	91%	GSMA Q3 2020
Kenya	96%	64%	
Africa	78%	54%	
Southern Africa	98%	91%	

South Africa accomplished universal 3G coverage across urban and rural South Africa.

ICASA published the state of the ICT sector in 2020 in March 2021 that displays population coverage for rural and urban areas by province (Table 20). Even for 4G population coverage, the rural coverage is above 87%.

Table 20: Population coverage in South Africa

	Rural				Urban			
	2G	3G	4G/LTE	5G	2G	3G	4G/LTE	5G
Eastern Cape	100%	99%	92%	0%	100%	100%	99%	2%
Free State	100%	100%	91%	0%	100%	100%	99%	3%
Gauteng	100%	100%	99%	0%	100%	100%	100%	2%
KwaZulu- Natal	100%	100%	91%	0%	100%	100%	100%	0%
Limpopo	100%	100%	94%	0%	100%	100%	100%	0%
Mpumalanga	100%	100%	97%	0%	100%	100%	99%	0%
North West	100%	100%	93%	0%	100%	100%	99%	0%
Northern Cape	100%	100%	87%	0%	100%	100%	98%	1%
Western Cape	100%	100%	93%	0%	100%	100%	99%	1%
Source	ICASA's Report on The State of the ICT sector in SA - March 2021							

In Namibia, 10 out of 14 regions had 4G population coverage of below 90% and 7 had 3G coverage below 90% (Table 21). Kunene, Kavango West and Omaheke had less than 50% 4G population coverage. Kunene and Omaheke also had low 3G population coverage with 50% and 66% respectively.

² Facebook Connectivity Lab and Center for International Earth Science Information Network - CIESIN - Columbia University. 2016. High Resolution Settlement Layer (HRSL). Source imagery for HRSL © 2016 DigitalGlobe. Accessed August 2021 from <https://data.humdata.org/dataset/highresolutionpopulationdensitymaps-nam>

Table 21: Population coverage by technology

	Population coverage			People not covered		
	2G	3G	4G	2G	3G	4G
Kunene	66%	50%	33%	36,817	54,792	73,110
Kavango West	94%	74%	40%	5,818	23,724	55,271
Omaheke	88%	66%	48%	9,309	27,247	41,581
Zambezi	100%	94%	60%	191	5,919	41,985
Kavango East	97%	90%	69%	4,622	15,526	50,734
Otjozondjupa	94%	84%	72%	9,551	26,569	45,866
Hardap	87%	80%	72%	12,364	19,385	26,711
!Karas	89%	83%	73%	9,912	15,252	24,113
Oshikoto	99%	86%	73%	2,887	30,195	57,636
Omusati	99%	97%	82%	1,865	9,069	48,504
Ohangwena	99%	94%	90%	2,298	17,305	26,486
Erongo	98%	96%	92%	4,461	9,671	17,616
Oshana	100%	99%	96%	108	1,501	7,533
Khomas	99%	97%	96%	6,826	12,142	17,447
Namibia	96%	89%	79%	107,031	268,296	534,593

Mobile infrastructure is dominated by MTC. MTC owns 72% of all RAN sites, Telecom Namibia 25% and Paratus only 3%. Paratus only has RAN sites in four regions, Erongo, Hardap, Khomas and Otjozondjupa, while MTC and Telecom Namibia are operating RAN sites in all regions.

Table 22: RAN sites and fibre km

	RAN Sites							Fibre Km
	MTC		Telecom Namibia		Paratus		All	
	#	market share	#	market share	#	market share	#	
!Karas	65	71%	27	29%			92	3,044
Erongo	104	67%	42	27%	10	6%	156	2,164
Hardap	51	66%	24	31%	2	3%	77	2,372
Kavango East	35	76%	11	24%			46	711
Kavango West	28	80%	7	20%			35	385
Khomas	204	69%	66	22%	25	8%	295	1,904
Kunene	58	77%	17	23%			75	821
Ohangwena	50	72%	19	28%			69	199
Omaheke	52	78%	15	22%			67	1,354
Omusati	57	71%	23	29%			80	384
Oshana	59	78%	17	22%			76	207
Oshikoto	52	69%	23	31%			75	645
Otjozondjupa	94	74%	30	24%	3	2%	127	1,837
Zambezi	37	80%	9	20%			46	498
Namibia	946	72%	330	25%	40	3%	1,316	16,524

Quality of Service

26 countries in Africa had faster average broadband speeds than Namibia. Not only is the average download speed in South Africa three times the speed of Namibia, but most SADC members also have faster broadband services, including Angola, Zimbabwe, Lesotho, Eswatini, Tanzania, Madagascar and Mauritius. Namibia's ICT sector is characterised by state ownership and insufficient competition. This has meant insufficient investment in last-mile connectivity, most notably mobile 4G broadband, low quality of service and potentially high end-user prices. Prices will be analysed in the next section.

Table 21: 2020 Broadband speed ranking for Africa

Ranking	Country	Mean download speed (Mbps)	Unique IPs tested	Total tests
1	Madagascar	18.00	19,883	85,638
2	Réunion	16.35	10,126	26,865
3	South Africa	14.04	1,269,432	10,194,970
4	Kenya	8.20	281,603	2,068,722
5	Lesotho	7.43	172	261
6	Mauritius	7.28	8,998	44,681
7	Zimbabwe	6.92	3,076	9,150
8	Liberia	6.83	475	1,818
9	Cape Verde	6.64	958	2,944
10	Morocco	6.55	1,177,091	3,726,768
11	Senegal	5.93	11,285	19,521
12	Tunisia	5.66	652,081	1,660,757
13	Cote D'Ivoire	5.55	5,420	11,729
14	Ghana	5.46	26,503	213,882
15	Uganda	5.16	23,858	145,339
16	Comoros	4.85	129	346
17	Egypt	4.71	824,792	1,254,663
18	United Republic of Tanzania	4.54	20,582	117,255
19	Eswatini	4.51	845	2,253
20	Gabon	4.37	3,433	5,970
21	Burkina Faso	4.19	2,247	6,157
22	Angola	4.15	9,311	19,299
23	Malawi	4.07	802	3,460
24	Burundi	4.04	602	1,897
25	Togo	4.03	5,591	10,732
26	Seychelles	3.96	734	3,020
27	Namibia	3.91	4,291	8,163
Source	https://www.cable.co.uk/broadband/speed/worldwide-speed-league/			

Namibia's 3G can barely be called broadband. The average download speed on 3G was 1 Mbps. 4G speeds are reasonable at 19.33 Mbps. Surprisingly, Kunene and Kavango West had

the fastest 4G download speeds, among all of Namibia's regions. However, that can be explained by low 4G device penetration. With a low number of 4G devices within the coverage footprint, each device can use more of the available throughput.

Table 22: Mobile quality of service KPIs

Region_Name	Call blocking Admission Control (BCR)	Call Setup Success Rate (CSSR)	Drop Call Ratio (DCR)	Average Mbps 3G	Average Mbps 4G
Kunene	0.1124	98.2	0.4123	1.08	28.88
Kavango West	0.0540	98.7	0.3481	1.08	26.69
Omaheke	0.2027	98.8	0.3554	0.92	24.15
Omusati	0.1475	98.7	0.2105	1.20	23.91
Otjozondjupa	0.0771	99.0	0.2878	1.16	23.69
Kavango East	0.0777	99.3	0.1434	1.27	23.40
!Karas	0.0309	99.0	0.2985	0.95	23.19
Hardap	0.0419	99.0	0.2642	0.93	22.91
Ohangwena	0.0680	98.9	0.2680	1.08	22.44
Zambezi	0.0726	98.9	0.2545	1.24	22.16
Oshikoto	0.0910	99.1	0.2454	1.05	20.91
Oshana	0.0432	99.3	0.1029	1.08	20.44
Erongo	0.0374	99.5	0.1051	1.06	19.24
Khomas	0.0193	99.5	0.0737	1.07	17.93
Namibia	0.0526	99.2	0.1675	1.08	19.33

Mobile Price Benchmarking

The price analysis is based on prepaid prices because most Namibians use prepaid.

Prepaid products with varying validities are made comparable by calculating the monthly cost. Prepaid products include five Aweh O' Yeah baskets using minimum SMS and voice allocations and vary by selected data. The Telecom Namibia unlimited packages are capped at 3GB per day, 21GB per week and 90GB per month. While it would be possible to use more data in some locations, congestion is likely to limit higher data downloads.

While Africa has seen rapidly declining mobile broadband prices, in Namibia, they have increased. Figure 6 displays the price of the cheapest product for 1GB prepaid data per month from MTC and TN Mobile. MTC increased its prices since Q1 2015. Figure 6 further illustrates that there is very little movement in the market in terms of price competition.

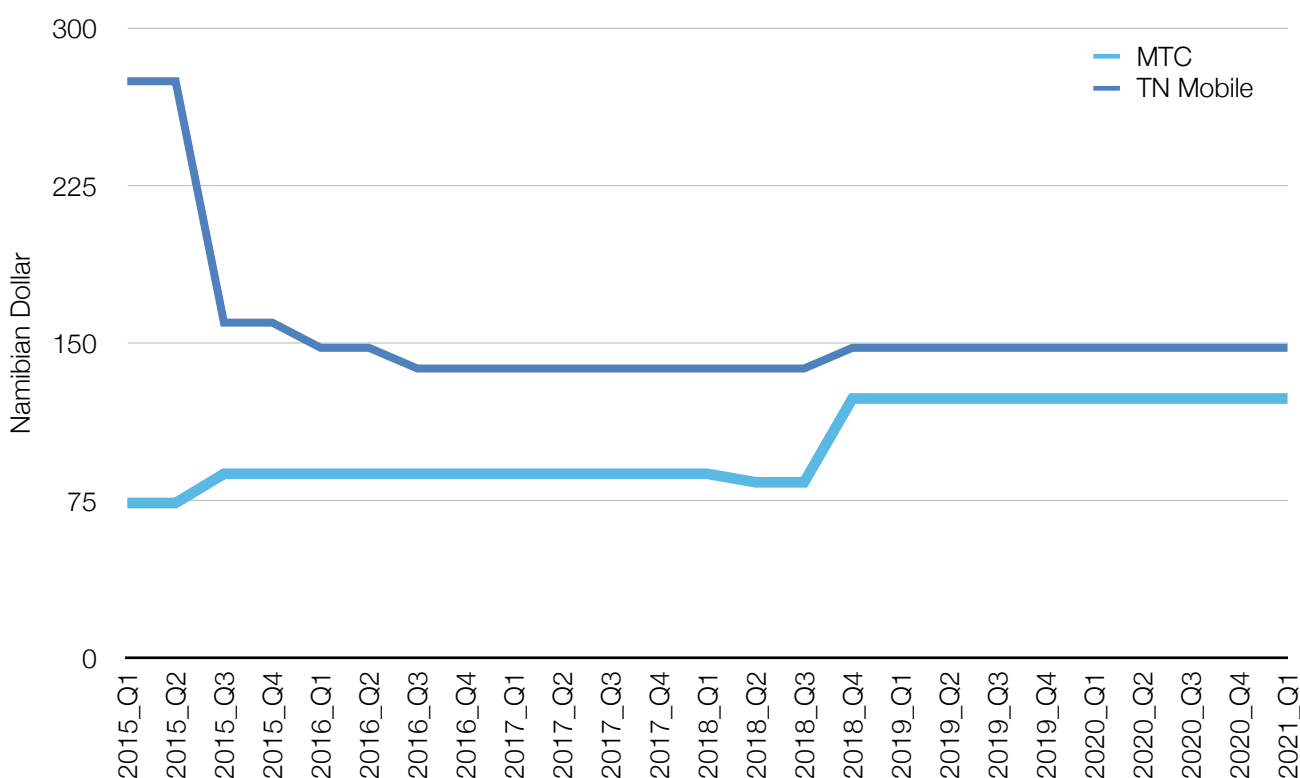


Figure 6: Lowest price for 1GB prepaid per month prepaid in NAD

South Africa has insufficient competition despite four national mobile operators. Vodacom and MTN are the largest MNOs. Vodacom’s subscriber market share is 43%, MTN’s 29%, Cell C’s 17.5% and Telkom’s 11%. Rain’s market share was a mere 0.23% at the end of 2019, based on data from the GSMA. The Competition Commission found that price-based competition in the data-services market was inadequate and that Telkom and Cell C “are unable to effectively constrain the two first-movers (MTN and Vodacom)”.³ South Africa’s policymakers are correct in their assessment that South Africa’s prices are too high. ICASA’s ongoing inquiry into mobile

³ Competition Commission, 2019. Data Services Market Inquiry Final Report, section 19.

broadband services found that data prices are too high. The Competition Commission of South Africa found that data prices are excessive and forced Vodacom and MTN to lower their prices. This is, however, only a short term relief and the Competition Commission needs to find ways to increase competition in the sector.

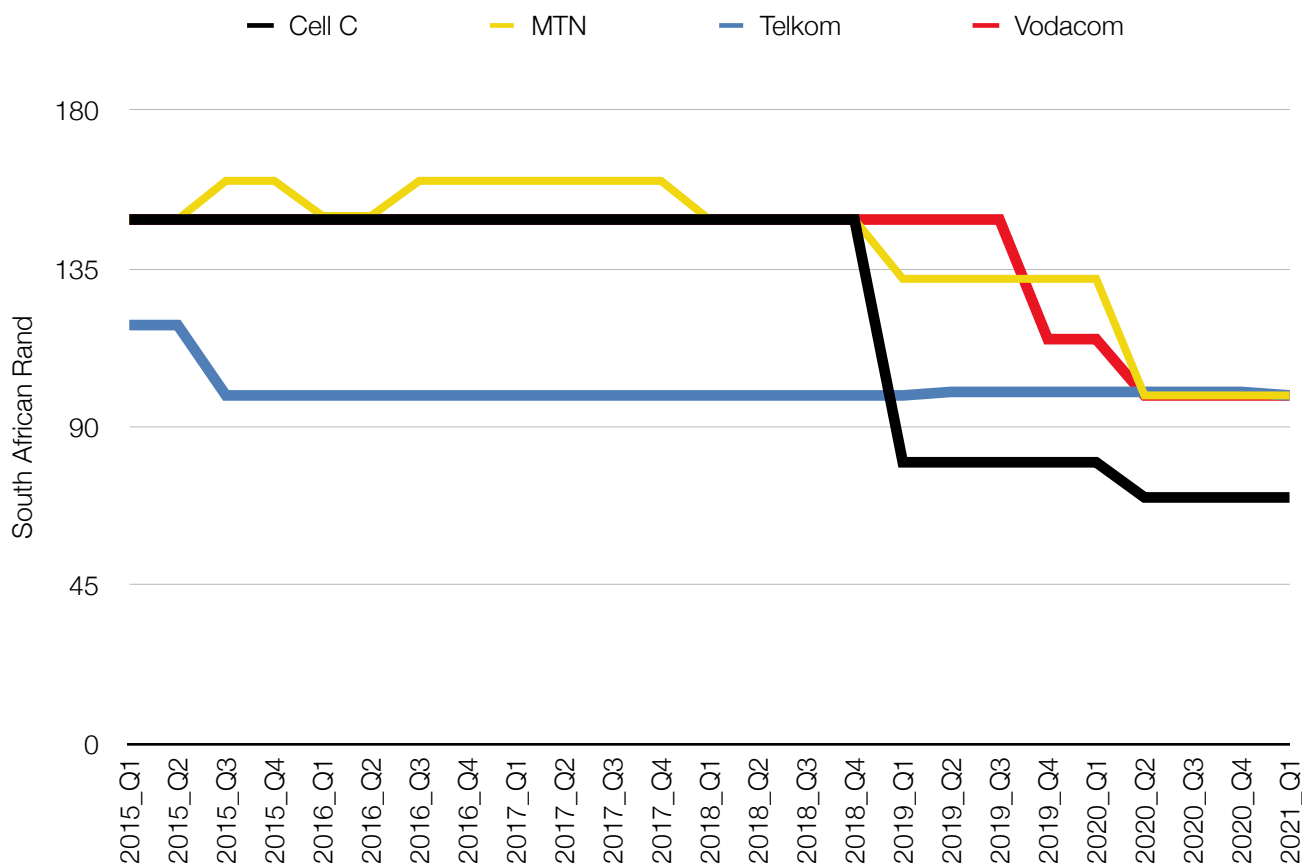


Figure 7: Lowest price for 1GB per month prepaid in ZAR

The case in Namibia is even more severe than South Africa, where the only two national operators are both owned by the same holding company, i.e., less competition than in South Africa, where four mobile operators compete and only one of them has partial state ownership. The absence of competition led to higher, not lower broadband prices, in the past 4 years, contrary to global trends. MTC’s price of 1GB prepaid data per month increased by 41% since Q1 2016 while operators in Botswana, Zambia, Mozambique and even South Africa decreased their prices significantly during the same period (as shown in Figure 8 below).

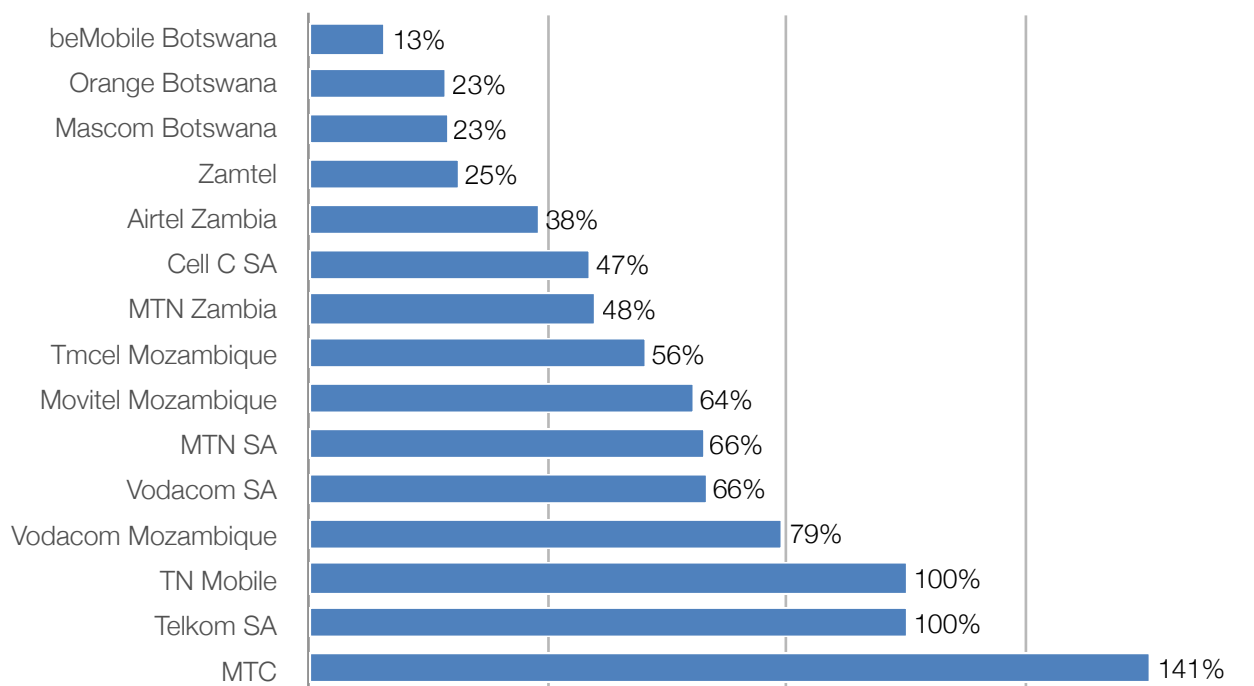


Figure 8: Lowest price in local currency in 2021 Q1 expressed as % of 2016 Q1 price for 1GB per month prepaid (Source: RIS)

Namibia slipped in the African Affordability ranking from 4th cheapest in Q1 2016 to the 33rd cheapest country in Q1 2021 for 5GB per month. Namibia is one of the most expensive countries in Africa for mobile broadband. The price of the cheapest product available in Namibia in Q1 2021 for 1GB monthly prepaid usage was USD 8.3. In comparison, the same basket costs 60 US cents in Egypt, USD 4.7 in South Africa or even USD 4.3 in DRC Congo (Figure 9).

Table 23: Namibia's Ranking from mobile prepaid data in Africa for cheapest product

	100MB	500MB	1GB	2GB	5GB	10GB	20GB	OECD Basket 30 calls 100 SMS
2016_Q1	8	16	14	8	4	6	6	15
2016_Q2	11	20	18	11	4	7	7	16
2016_Q3	15	21	19	15	11	13	14	15
2016_Q4	13	20	19	16	13	14	14	18
2017_Q1	15	24	23	18	14	15	16	18
2017_Q2	20	25	24	20	13	14	16	17
2017_Q3	18	25	23	21	13	14	16	19
2017_Q4	19	29	25	20	14	15	17	17
2018_Q1	20	37	31	26	19	23	25	25
2018_Q2	20	37	29	25	18	22	25	23
2018_Q3	18	36	29	27	20	21	23	22
2018_Q4	21	42	42	30	23	27	31	24

	100MB	500MB	1GB	2GB	5GB	10GB	20GB	OECD Basket 30 calls 100 SMS
2019_Q1	24	44	44	34	24	28	32	24
2019_Q2	25	44	45	35	25	23	20	25
2019_Q3	25	44	43	34	24	21	18	23
2019_Q4	26	43	44	36	28	21	17	25
2020_Q1	26	44	45	37	27	21	17	26
2020_Q2	29	46	45	38	28	23	21	26
2020_Q3	29	46	45	38	29	24	21	29
2020_Q4	29	45	44	39	31	24	21	28
2021_Q1	30	44	47	42	33	27	21	27

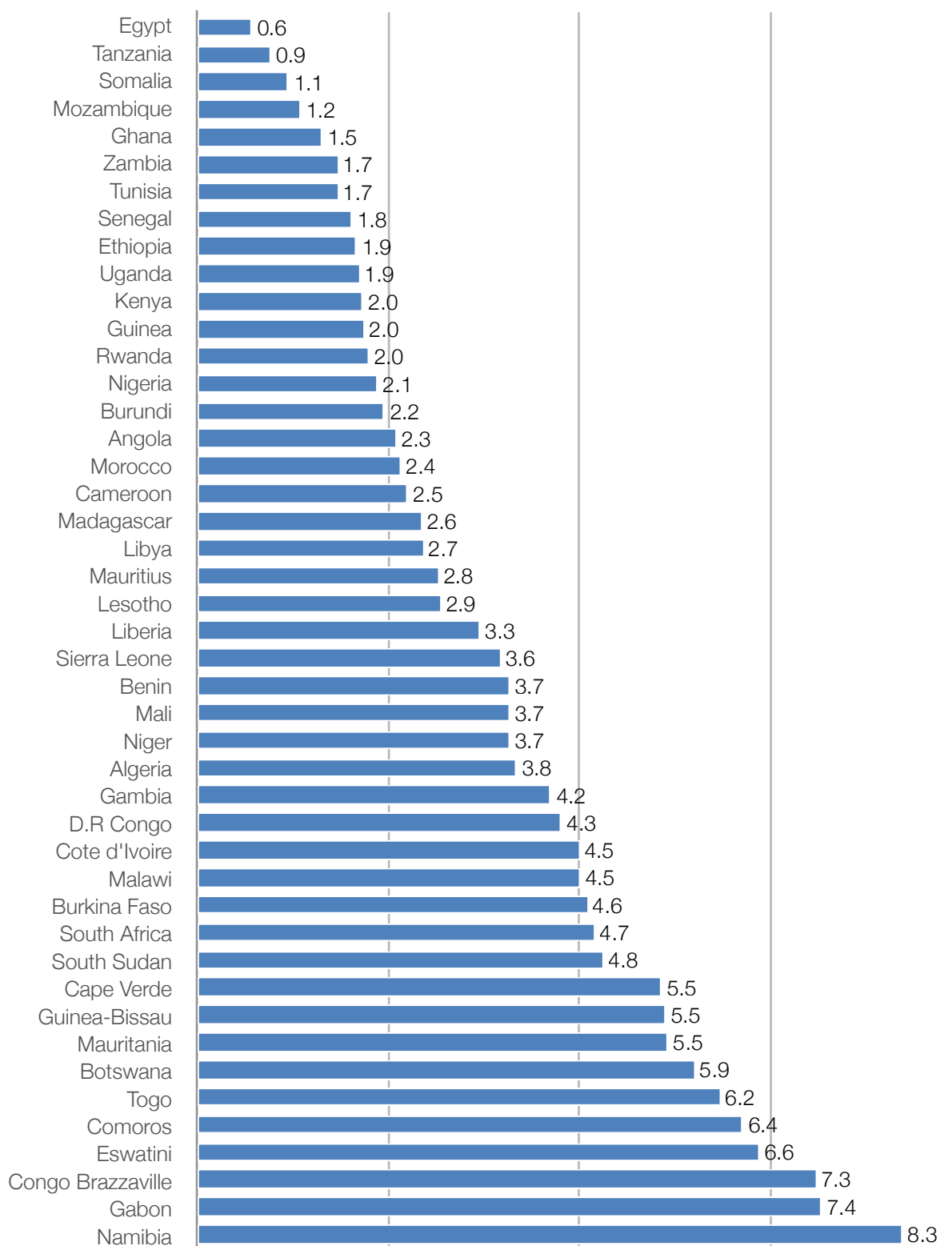


Figure 9. Prices for 1GB prepaid data per month in Q1 2021, cheapest in the country (Source: RIS)

MTN Ghana runs a high volume, low price business model. MTN Ghana is particularly cheap for lower usage per month. Its 100MB to 2GB baskets are the cheapest. MTN Ghana has a respectable EBITDA margin of 52.7%. Its average monthly data use for active data users is also high at 4.26GB. MTN Nigeria has a lower usage of just 2.56GB per active user and a lower

EBITDA margin of 50.9%, while being the cheapest in this comparison for the 10GB and the 20GB baskets. This shows that both the low-end and the high-end business models can be successful, while still offering cheap prices to consumers. MTC is at the opposite end of the affordability spectrum and is the most expensive operator in this comparison, and also the one with the second highest EBITDA margin.

Table 24: MTC compared to selected MTN operations in Africa

Operator	Monthly USD Q1 2021									EBITDA Margin	MB per active user
	100MB	500MB	1GB	1.5GB	2GB	5GB	10GB	20GB	Average		
Ghana MTN	0.35	0.86	1.55	2.07	2.59	5.70	11.39	22.79	5.91	52.7%	4,256
Rwanda MTN	1.01	2.01	2.01	4.03	4.03	8.64	10.07	20.15	6.49	48.6%	2,228
Zambia MTN	2.36	2.75	2.75	2.75	5.51	5.51	11.01	16.52	6.15	29.2%	2,082
Nigeria MTN	2.48	2.48	2.48	2.48	2.97	6.19	8.67	12.39	5.02	50.9%	2,555
Namibia MTC	3.01	8.31	8.31	8.31	8.31	10.25	13.92	23.67	10.51	52.0%	3,261
Sources	Research ICT Solutions									AFS 2020	

Conclusion

ICT sector revenues, shareholder's equity and assets declined between 2012 and 2020 in USD terms while net profits increased slightly. While this is to be expected as the result of the nationalisation of the ICT sector, it is not in the best interests of the principal shareholder (the state) or Namibia as a whole. A consequence of affordable access to high quality broadband is economic growth and job creation. The ICT sector enables other economic sectors by facilitating access to information and the co-ordination of economic activity. In order to achieve high broadband speeds and quality of service, and their associated economic benefits, substantial investments are required.

Namibia's ICT sector was one of the leaders in Africa as recently as five years ago. Namibia lost its leading role in Africa as a result of state-driven consolidation in the sector and the significant reduction in competition. Broadband prices are high and download speeds low in comparison to other SADC countries. Namibia can regain its position but needs to restructure the sector and investigate ways to attract private sector investment and to improve the level of competition.