

Namibian Telecommunication Sector Performance Review

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Executive Summary

The future may hold trade-offs that need to be carefully balanced.

Since the last ICT sector performance review of 2006, much has happened in Namibia for the better. Namibia now has three mobile operators, a single ministry in charge of policy for the sector, new policies, a new Act, and it should soon have a new stronger and more independent regulator. Namibia has started to catch up with South Africa and Botswana. Prices have more than halved for mobile telephony and Internet access, and broadband has found its way to Namibia in mobile and fixed versions. Perceptions of stakeholders regarding the regulatory environment improved accordingly in 2009 compared to 2006, indicating that changes under Minister of Communications, Joel Kaapanda's watch have been well received. The second mobile licence and subsequent competition in the mobile sector in 2006 was the first game-changer. Enforcing the licence conditions of Leo and MTC (termination rates based on cost) in 2009 added to that new game being played more fairly.

Many challenges remain however. Telecom Namibia will need to change course and focus on profitability or face the risk of becoming another indebted state-owned enterprise (SOE) with dwindling significance for Namibia's telecommunication sector. The Namibian Government would be well advised to sell a large share of Telecom Namibia to a strong operator with low-cost CMDA expertise.

The fixed-line sector may require regulatory intervention, separating wholesale from resale, and unbundling of the local loop to allow other operators access to Telecom Namibia's customers. That might sound like a threat to Telecom Namibia's existence but is likely to be a blessing – just as competition was a blessing to MTC, which is now a much stronger and more profitable company than it ever has been.

The new regulator, CRAN, needs to build regulatory capacity and establish credibility in the market. Licences and laws need to be enforced consistently and transparently. The regulator needs to balance consumers' interests and return on investment. Namibia's 13 years of mobile monopoly has made that easy in the period 2006 to 2009. Lower prices increased consumer welfare and provided operators with more profits and reasons to invest. The future may hold trade-offs that need to be carefully balanced.

The key findings of this report are:

- The contribution of the communication sector to GDP has steadily increased over the past 18 years.
- MTC is flourishing while Telecom Namibia is increasingly struggling to deliver returns that would be expected from any owner other than government.
- Namibia fares well when comparing the cheapest prepaid product available in a country, occupying the middle of the field in a comparison of 18 African countries. However, for the cheapest product available from dominant operators, in this case MTC, Namibia is the third most expensive prepaid operator, surpassed only by Cameroon and Burkina Faso. This is significant since it means the majority of people pay high prices, with MTC having a market share of around 80% and the bulk of its subscribers being on prepaid.
- Lowering mobile termination rates towards the cost of an efficient operator increased competition in the sector and led to lower prices, more subscribers and even better performance of the incumbent mobile operator, MTC, which claimed that the opposite would be the case. There certainly has been no waterbed effect.
- The telecommunications regulatory environment is perceived by stakeholders as having drastically improved compared to 2006, yet still requires improvement to be evaluated as efficient.

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Introduction

The Namibian ICT Sector Performance Review (SPR) analyses recent developments in the sector and provides information and analysis for policy makers and regulators. It draws on data from nationally representative household surveys conducted by Research ICT Africa in 2004 and 2007, data collected from operators and industry stakeholders, stakeholder perception surveys regarding the efficiency of the regulatory environment for 2006 and 2009, and price comparisons conducted regularly by the Namibian Economic Policy Research Unit (NEPRU) based on OECD price basket methodology.

Falling prices and economic growth has led to a narrowing of the digital divide.

Table 1: Namibia's digital divide at a household level (RIA 2004 and 2007 surveys)

Households with working...	Namibia			Urban			Rural			Urban Rural Difference		
	2004	2007		2004	2007		2004	2007		2004	2007	
Electricity	34%	47%	↑	78%	81%	↑	6%	24%	↑	72%	57%	↓
Fixed-line phone	13%	17%	↑	31%	32%	↑	2%	8%	↑	29%	24%	↓
Radio	77%	73%	↓	88%	82%	↓	70%	66%	↓	18%	16%	↓
TV	31%	38%	↑	71%	72%	↑	5%	15%	↑	66%	57%	↓
Computer	5%	11%	↑	11%	23%	↑	0%	4%	↑	11%	19%	↑
Internet Connection	2%	3%	↑	4%	7%	↑	0%	1%	↑	4%	6%	↑

The digital divide (the divide between those that have access to electricity and ICTs and those that do not) declined in Namibia from 2004 to 2007. More households had access to electricity, a fixed-line phone, a TV, a computer and an internet connection at home in 2007 compared to 2004. Only the number of households with a working radio declined during that period, indicating a substitution of radio by TV. Even the difference between rural and urban areas' access to electricity, fixed-line phones, radio and TV at home declined. For computer and Internet however, despite more rural and urban households having access, the difference increased. Computer and Internet access, apart from requiring more financial resources once-off and as a monthly commitment, are also limited by educational barriers.

This success can be attributed to general economic growth, but also to falling prices for telecommunication and Internet access and hence Namibia's policies and regulatory environment. The link between policies, regulation and sector performance is a key component of this review.

The next chapter describes Namibia's telecommunication sector and key players. The third chapter raises selected policy and regulatory issues. The fourth chapter evaluates sector performance of the telecommunication sector by evaluating the regulatory performance and comparing price and other developments to other African countries.

Namibia's Telecom Sector

During the 1990s, Namibia experienced a fundamental change in the way telecommunication services were delivered through the creation of the commercialised fixed-line operator, Telecom Namibia, in 1992, followed by the commercialised mobile operator, Mobile Telecommunications Corporation (MTC), in 1995, both owned by Government through the holding company Namibia Post and Telecommunications Holdings (NPTH). A second mobile operator, Leo¹, was licensed in 2006, an event which highlighted the dire need to revise the country's telecoms legislation, especially after Telecom Namibia entered the wireless market with Switch. Drawn out consultations on a new Communications Act finally resulted in the passing of new telecoms legislation in 2009. The legislation includes provision for a Communications Regulatory Authority of Namibia (CRAN) and stipulates that telecoms companies must be majority Namibian owned. Despite all the shortcomings associated with its legal framework, greater competition has allowed Namibians to benefit from more choice and lower prices in mobile telephony. Ownership remains an issue and the jury is out on whether public, public-private, and private sector operators can successfully operate in competition with each other on a level playing field.

Namibia experienced a fundamental change in the way telecommunication services are delivered

Until recently, Namibia's telecoms sector was governed by legislation that was 17 years old. The 1992 Posts and Telecommunications Act² and the accompanying Post and Telecommunications Companies Establishment Act³ made provision for the establishment of Namibia Post and Telecommunications Holdings (NPTH), the holding company of Telecom Namibia, Namibia Post and later, in 1995, Mobile Telecommunications (MTC), under the line Ministry of Works, Transport and Communication (MWTC). NPTH was established as a property development company providing property facilities and custodial services to its subsidiary companies but little in the way of strategic guidance, coordination, support or material involvement in the business decisions of its three subsidiaries, which operated more or less independently of each other.

In the same year the Namibian Communications Commission Act gave rise to the NCC. The NCC was originally established primarily to licence radio frequency users and regulate radio and TV broadcasters with little consideration for the telecoms sector. The main function of the NCC was to allocate radio frequencies to users including radio and TV broadcasters and mobile telephony operators as well as to award licences to telecoms operators. The advent of MTC in 1995 required an amendment to the NCC Act and gave the NCC the power to regulate the prices MTC was allowed to charge. Later, in 2000, the NCC was given the responsibility to coordinate the application and tendering process for the second cellular licence. However, when it became clear that it did not have the authority, a second amendment to the NCC Act was passed by Parliament in March 2004.⁴

This legislation and the accompanying institutional structures reflected government's thinking at the time. Prior to the 1992 Act, telecoms had been the responsibility of a government department within the Ministry of Works, Transport and Communication. Both the income and expenditure side of its operations, including its investment decisions, were dictated to a large extent by national budgetary allocations. In what proved a far-sighted move, Government – with Swedish support – was convinced that the high-tech and fast-moving telecoms sector would be better served by a commercial entity rather than a bureaucratic government department.

NPTH

As pointed out above, Cabinet memoranda at the time viewed NPTH as a temporary vehicle allowing Telecom to subsidise NamPost, which was expected to take far longer to start breaking even. As things turned out, NamPost reached profitability far earlier than expected. Over time all three NPTH subsidiaries have developed capabilities and assets in areas that were originally envisaged for NPTH, although all property used by the three subsidiaries is owned and maintained by NPTH.

¹ CellOne rebranded into Leo in 2009

² Posts and Telecommunications Act (Act No. 19 of 1992)

³ Posts and Telecommunications Companies Establishment Act (Act No. 17 of 1992)

⁴ Namibian Communications Commission Amendment Act (Act No. 4 of 2004)

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Table 2: Chain of events

Year	Event
1992	Post and Telecoms Act passed with MWTC as line ministry Namibia Post and Telecoms Holdings (NPTH) established Telecom Namibia established Bo Eklöf appointed MD of Telecom Namibia Namibian Communications Commission established under MIB
1995	Mobile Telecommunications (MTC) established with Swedish technical partners Telia and Swedfund Per Eriksson appointed MD of MTC
1996	Theo Mberirua appointed MD of Telecom Namibia
1998	Bertil Guve replaces Per Eriksson as MD of MTC
1999	Telecommunications Policy and Regulatory Framework adopted envisaging liberalisation by 2004 and second mobile operator MTC introduces Tango prepaid service
2000	NCC nominated to coordinate second cellular licence
2001	Bengt Strenge appointed MD of MTC
2002	Draft Communications Bill introduced to make way for Communications Authority of Namibia (CAN)
2002	Frans Ndoroma appointed MD of Telecom Namibia
2003	Deadline for granting second cellular licence missed
2004	Namibia Communications Commission Amendment Act passed Telia Overseas AB and Swedfund International AB sell 49% of MTC to NPTH for approximately N\$500 million Granting of second cellular licence delayed Telecom Namibia enters agreement with Mundo Startel of Angola
2005	Deadline for second fixed-line licence missed Telecom Namibia signs agreement with VSNL/Tata for the Second National Operator in South Africa
2006	Portugal Telecom buys 34% of MTC for N\$1.02 billion PowerCom (Leo) awarded second cellular licence and announces SIM cards will be out by end of the year Mac Allman appointed MD of Leo José Ferreira replaces Bengt Strenge as MD of MTC Telecom Namibia introduces Switch fixed-wireless service MTC launches 3G broadband service
2007	Leo officially launches service Lars-Christian Luel appointed MD of Leo Miguel Gerales appointed MD of MTC
2008	Ministry of Information and Broadcasting changed to Ministry of Information and Communication Technology Joel Kaapanda appointed Minister Telecom launches bond programme
2009	Orascom buys Leo Soban Pasha appointed MD of Leo Cabinet lifts restrictions on Switch NCC regulates interconnection charges Leo tenders for BEE partners CellOne renamed Leo MTC and Leo awarded international voice licences Telecom granted credit rating by Fitch Ratings Communications Act passed Communications Regulatory Authority of Namibia (CRAN) board appointed
2010	June: Communication Act not yet activated June: Minister seeks help from ITU to fine tune Communications Act
Note:	MWTC (Ministry of Works, Transport and Communication) MIB (Ministry of Information and Broadcasting)

Telecom Namibia

Rather than opt for outright privatisation, Government created Telecom Namibia. There appear to have been three main reasons why Government was determined to keep Telecom in state hands. First, state ownership had historically been the classic prescription in the case of fixed-line networks which possessed the characteristics of a natural monopoly. Without regulation, private ownership of a natural monopoly would always be prone to abuse. Second, Government wanted Telecom Namibia to pursue developmental as well as commercial goals and was concerned that a private company would “cherry pick” – serving richer urban areas while neglecting the poorer rural population. Third, a certain amount of economic nationalism balked at the idea that the country's telecoms infrastructure (“the family silver”) could end up in the hands of foreigners, a likely outcome if the company were to be privatised. Furthermore, although this has never been explicitly stated, Telecom Namibia was to be part of a growing State-Owned Enterprise (SOE) sector serving as a training ground for a cadre of new black Namibian managers and professionals.

Telecom Namibia was to carry out its ambitious programme of investment without placing a direct burden on the national budget. It was to be allowed to recoup the costs of these investments through the prices it charged over a given period of time, and would be governed by a performance agreement with the MWTC, although this did not carry any legal backing. Furthermore, under the terms of its statutory licence, Telecom was granted the monopoly on international voice and data gateways to and from Namibia. Telecom Namibia was to focus on improving the country's fixed-line telephony infrastructure and had a universal service obligation. No one seems to have thought at that stage that mobile telephony, which was still very much in its infancy in developing countries, had the greater potential to reach the vast mass of the country's population.

However, with no profit motive, no competition and only a weak regulatory framework consisting of a rather flimsy performance agreement with its line ministry, there were no strong incentives to perform. Although growth in turnover turned out to be relatively robust, profitability did not rise by anywhere near the same extent. As a study commissioned by SIDA⁵ pointed out, “a significant part of Telecom's top-line growth has been the result of sharp price increases at the expense of customers. Whereas turnover has grown more than five times since the corporatisation, installed DELs [Direct Exchange Lines] have merely doubled over the same period.” This came as no great surprise given Namibia's geography and demographics and Telecom's obligation to fulfil developmental goals.

MTC

MTC, created in 1995, came under the regulatory ambit of the NCC, requiring, as it did, the use of specific radio frequencies and therefore frequency licences. The arguments that applied to Telecom – natural monopoly, cherry picking and economic nationalism – could equally have been applied to MTC. Yet, perhaps because at the time cellular telephony was a relatively new technology requiring scarcer technical expertise, Government decided to take a different approach towards MTC. Two significant foreign partners and shareholders were brought in from the beginning and foreign MDs appointed (Swedish nationals Per Eriksson, then Bertil Guve, followed later by Bengt Strenge). MTC's universal service obligation is defined in vague terms by its licence⁶, while LEO has very specific rollout obligations.⁷

MTC did well until 2006 in spite of being a monopoly, and even better afterwards

The introduction of prepaid services by MTC in 1999 helped boost its customer base to over 610,000 subscribers by the time competition arrived in the mobile telephony market in 2006.

From the word go, MTC had to pay Telecom for international traffic. At that time cellular telephony was still in its infancy with “2G” GSM making its debut mostly in richer countries. However, in stark contrast to Telecom, MTC's financial performance has been exceptional. In 2009 MTC made an after-tax profit of N\$388 million from a turnover of N\$1,390 million – a profit margin of 28%. Until 2006 MTC too was a monopoly. Yet, as former MD Bengt Strenge stated in one interview⁸, MTC did well

⁵ Resource Paper 2, Cooperation between Namibia and Sweden in the Transport and Communications Sectors: Commercialisation in the Namibian Transport and Communications Sectors, Herman Marais February 2006

⁶ Government Gazette No.3815, 29 March 2007, section 12

⁷ Government Gazette No.3676, 11 August 2006, appendix.

⁸ “We have done well in spite of being a monopoly.” Interview with Bengt Strenge, Insight Namibia, June 2005

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in spite of being a monopoly. Neighbouring Botswana achieved higher penetration rates more quickly with two privately-owned operators⁹.

In 2004 Telia and Swedfund sold their combined 49% shareholding in MTC to Government. Two years later in July 2006, 34% of MTC was sold to Portugal Telecom for N\$1.02 billion following a competitive bidding process involving 15 companies. Portugal Telecom already had interests in South America and China and also in seven African countries where it had more than five million subscribers. Until 2004 it was also a major shareholder in Mascom of Botswana. Its operations in Angola (it owned 25% of Unitel) were undoubtedly a factor which helped it win the bid. And it was noteworthy that Government decided not to opt for a South African company. From the sale, a portion went to pay off the loan used to pay Teleia and Swedfund, while N\$648 million found its way into Government coffers in the additional budget in November¹⁰. Portuguese national José Ferreira was appointed to replace MD Bengt Strenge who stepped down on 1 September 2006. Ferreira had worked for Mascom in Botswana for almost five years between 1998 and 2006.

Regulatory Approach

For years, few fundamental changes took place in Namibia's telecoms sector. Telecom Namibia remained a monopoly provider of fixed-line services responsible to the MWTC, while MTC remained a monopoly provider of cellular services regulated by the NCC. Some diversification in the provision was achieved: Telecom introduced toll-free services, ISDN, video-conferencing and voice mail services and established international connectivity between Namibia and the rest of the world via INTELSAT satellites. Telecom launched its long-awaited ADSL service in 2008 and had about 6000 ADSL subscribers by the end of 2009. MTC introduced its prepaid Tango service in 1999, which allowed it to significantly increase its customer base. The introduction of GPRS in 2004 further allowed Internet access from GPRS-enabled handsets.

Namibia's overall telecoms performance during that time can be better assessed in comparison with other countries which have adopted different approaches. The table below presents a comparison between Namibia, Botswana and South Africa. Botswana too has a 100% state-owned fixed-line operator, the Botswana Telecommunications Corporation (BTC), while in South Africa the state-owned monopoly Telkom was partially privatised, floating on the New York Stock Exchange and the Johannesburg Stock Exchange in 2003. While Namibia's MTC has for the most part been a public-private partnership, Botswana licenced two entirely private companies, Mascom and Orange (previously Vista), from the beginning in 1998. South Africa started by granting two licences in 1994, one to Vodacom, a 50:50 partnership between Telkom and the UK's Vodafone, and MTN, an entirely private company. Privately owned CellC received its mobile licence in 2001 while Virgin Mobile South Africa, owned entirely by the UK's Virgin Group plc., entered the market as a Virtual Network Operator (VNO) under a joint venture with CellC rather than as a full licence holder in 2006. Both Botswana and South Africa have independent regulatory authorities with far higher levels of resources than the NCC has ever enjoyed, even taking into account South Africa's much larger size. Both are financed by a combination of licence fees and industry levies.

International comparisons of telecoms performance are often difficult to make since there are so many different prices for so many different services. Clearly, however, price is a crucial determinant of teledensities and one can expect higher prices to be associated with lower teledensities, especially in countries with predominantly low-income populations. Crucially, Namibia historically came out poorly in price comparisons and both Botswana and South Africa had far higher mobile teledensities than Namibia, suggesting that Namibia's state-owned monopoly model was inferior to a model that relies on competition between more than one company.

Government, through NPTH, was the sole shareholder of Telecom, the monopoly fixed line provider, and MTC, the monopoly cellular provider. Neither company directly trespassed on each other's market. However, Telecom was clearly not as financially successful as MTC, which has perhaps made the greatest impact on providing telephone services to the masses thanks to Tango. In 2006 alone MTC was able to increase its customer base by 150,000 people thanks to reductions in the price of starter packs and lower priced recharge vouchers. Indirectly, MTC was steadily eroding the rationale

Namibia historically compared poorly to Botswana and South Africa, suggesting that Namibia's state-owned monopoly model was inferior to a model that relies on competition

⁹ MTC had succeeded in attracting 610,000 customers out of a population of 2 million by the end of 2006, while neighbouring Botswana had 840,000 customers out of a population of 1.7 million a year before.

¹⁰ See "Statement for the Additional Budget – Financial Year 2006/07", November 2006, paragraph 13.

for Telecom's presence in the retail market. Added to this Telecom's monopoly had been due to end by 2004 since the adoption of the Telecommunications Policy and Regulatory Framework for Namibia 1999¹¹.

Table 3: Namibia compared to Botswana and South Africa

	Namibia	Botswana	South Africa
Fixed-line operators (shareholders)	Telecom Namibia (Government of Namibia 100% via NPTH), 1992	Botswana Telecommunications Corporation (BTC) (Government of Botswana 100%), 1980	Telkom SA (38% Government of South Africa), 1991 Neotel 2006
Cellular operators	MTC 1995 Leo (formerly CellOne) 2006	Orange (Botswana) 1998 Mascom Wireless (44% MTN) 1998 BE Mobile (owned by BTC) 2008	Vodacom 1994, MTN 1994, CellC 2001, Virgin Mobile 2006
Technology	GSM 900/1800, GPRS, 3G HSDPA	GSM 900/1800, GPRS, 3G HSDPA	GSM 900/1800, GPRS, 3G HSDPA
Regulator	Communications Regulatory Authority of Namibia (CRAN) Budget unknown Staff 6	Botswana Telecommunications Authority (BTA) Revenue P71.3 million (2009) Staff 64 (2009)	Independent Communications Authority of South Africa (ICASA) Revenue R241 million Staff 335 (2009)
International voice gateway licences	3 (Telecom Namibia, Leo, MTC)	3 (BTC, Orange, Mascom)	6
International data gateway licences	3 (Telecom Namibia, Leo, MTC) + corporate VSAT licenses	45 VANS (BTA annual report 2009)	6**
Main fixed telephone lines 2009	148,741*****	144,195	4,532,000****
Mobile active SIM cards in circulation 2009*	1,637,530	1,874,101	27.6 million subscribers for 2009, MTN 16.1 million subscribers at the end of 2009 and CellC 7.2 million subscribers at the end of 2008
Population	2,103,761***	1,776,494	

Sources: * Annual statements of operators, ** No distinction between data and voice for international gateways, *** Namibian Census with medium projection, **** 2008 (Gillwald et al 2010), ***** March 2010, source Telecom Namibia

Things started to change dramatically when the first major new player in Namibia's telecoms sector since 1995 arrived, following the granting of a second cellular licence in 2006. The draft Communications Bill, first drafted in 1999 as a follow-up to the SADC Protocol of 1998¹², had envisaged the introduction of competition in cellular telephony by 2003 through the granting of a second cellular licence. However, it was not until August 2006 that a second licence was awarded to Leo (owned by PowerCom) after a run-off between just two competing bids (the other being from ZDE of China). PowerCom was a company with four major shareholders: a Norwegian group called Telecom Management Partner (39%), NamPower (37%), Nam-mic (12%), and Old Mutual Namibia (10%) as well as an educational trust established by the shareholders (2%). The company's origins lay in the idea that NamPower's fibre optic control network could be used as the basis for a second operator. PowerCom's licence, for which it agreed to pay N\$65 million prior to launching, laid out a detailed timetable for the roll-out of its network across Namibia. The company estimated it would invest N\$2 billion over a period of five years. PowerCom was initially headed by Mac Allman and

Competition introduced in 2006 shook things up in Namibia

¹¹ "Telecommunications Policy and Regulatory Framework for Namibia 1999", Ministry of Information and Broadcasting, 1999.

¹² Telecommunications Policies for SADC, June 1998.

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employed Dr Leake Hangala, previously the MD of one of its shareholders, NamPower, as a director. The PowerCom board of directors was made up of representatives of its four major shareholders.

Early on, PowerCom stated its intention to compete on service quality rather than on price. It offered 3G HSDPA (High Speed Downlink Packet Access), and its prepaid service was entirely electronic, eliminating the need for the more costly and less secure voucher system used by MTC. PowerCom started with several advantages. It could invest in the most up-to-date technology without first having to recoup investment in old systems. It did not have to build all the infrastructure it required by itself. And it knew exactly what the competition was offering. PowerCom announced its SIM cards would be "under as many Christmas trees as possible"¹³ but the launch ended up being delayed. "We will not launch until we are sure the quality is ready," Allman stated to the media on 20 December 2006.

3G & Switch

3G roll-out was facilitated by competition

In an interview in May 2005, Bengt Strenge had argued that Namibia did not have the volumes to justify 3G since voice and sms were the "killer applications"¹⁴. He stated MTC had "no concrete plans" to introduce EDGE technology. However, with the advent of Leo on the horizon, MTC launched a 3G service using HSDPA technology on 15 December 2006. Since it started operating in 1995, MTC had used a GSM900 system ("2G"), later upgrading to GPRS (General Packet Radio Switching) in 2005 ("2.5G"). 3G refers to the third generation technologies. Many concluded that MTC's rather rushed introduction of a 3G service was as a direct result of competition and hard on the heels of PowerCom's announcement earlier in the year of its intention to introduce 3G, although MTC insisted it had already taken the decision to roll out 3G in October 2005, not long after Strenge had publically poo-pooed the idea.

MTC had already pre-empted the launch of Leo by introducing a 3G HSDPA service at the end of 2006. Telecom did not take the entry of a new player lying down. On 23 November 2006 it launched a fixed-wireless service called "Switch" with great fanfare and a high-profile marketing campaign. Fixed wireless is a radio frequency-based mobile technology based on cells using masts and base stations. The fixed refers to the fact that it does not allow roaming between cells. However, because cells can be anything up to 40km², it can cover a whole city such as Windhoek (although more masts are required for greater capacity). However, technically it is possible to link up cells to form a proper cellular network and this has happened in some countries. Telecom rolled out 800MHz Code Division Multiple Access (CDMA) bought from Huawei Technologies of China for N\$44 million in February 2006. This technology had the advantage that Telecom would no longer be responsible for cables to premises, the PABX or the telephone thus reducing maintenance and service costs. Its mobility made it far more convenient to customers and it allowed high speed Internet access about three times faster than ISDN. Switch only offered pre-paid options called Switch Easy and Switch Time in a clear bid to lure away lower income customers that formed the bulk of MTC's customer base as well as those who could not afford Tango. Switch was initially offered in Windhoek, but Telecom promised it would be offered to 31 additional towns and rural settlements in future¹⁵.

The political restriction of SWITCH to fixed-wireless damaged the brand to an extent that a rebranding seems plausible

However, Telecom's entry into mobile telephony caused friction with the NCC, which claimed it was not licensed to offer mobile services despite having allocated Telecom the 800MHz frequency in February 2005. MTC's new shareholders, Portugal Telecom, were also shocked to discover that the basis of their entry into the Namibian market had been changed: it had paid for 34% of MTC on the basis of one competitor in mobile telephony, not two. However, neither Portugal Telecom nor Leo can claim they were not aware of Telecom's statutory rights prior to making their investments.

The NCC was of the opinion that Switch was illegal¹⁶, but Government did not appear ready to let it act as an "arms-length" institution. In December Cabinet decided to create a new ad hoc committee under the chairmanship of the Prime Minister to look into the matter¹⁷. In March 2007 Cabinet tried to reach a compromise on Switch by allowing Telecom to offer the service but limiting Switch to a radius of 60km and prohibiting roaming between towns. The uncertainty surrounding the service

¹³ See "Cell Operator No. 2 Ready to Roll", *The Namibian*, 16 August 2006.

¹⁴ "I do not think there is the demand for the type of data speed that 3G would allow in our market." Bengt Strenge, *Insight Namibia*, June 2005.

¹⁵ See www.telecom.na

¹⁶ See "Telecom, NCC at Loggerheads", *The Namibian*, 24 November 2006.

¹⁷ See "Recent Cabinet Resolutions", *The Namibian*, 21 December 2006.

continued for several years until Cabinet decided to lift all restrictions on Switch in May 2009 – three years after its original introduction – on the basis of a recommendation from the Attorney General. Switch was, however, never illegal¹⁸, and the “voluntarily” restriction to fixed-wireless for three years is likely to have damaged the brand and its adoption considerably. So much so that it might be advisable for Telecom Namibia to relaunch its services altogether, possibly as converged services.

Mobile Termination Rates

Despite the formal introduction of competition, Leo clearly struggled to make inroads into MTC's market share (although the company has never published figures or financial statements), not least because the cards were to a large extent stacked in MTC's favour. The NCC had never regulated interconnection or termination charges in Namibia. When a call is made, originating on the network of one operator and terminating on the network of another, the customer is charged by the operator where the call originates but some cost is borne by the operator where the call terminates. The call charge therefore has to be split. How this was to be done is specified in the licences of MTC and Leo but had not been enforced until July 2009. That meant that incumbents with a large number of existing clients could use high termination rates together with high off-net call rates to shielded themselves from competition from newcomers. Interconnection charges for mobile-to-mobile calls were N\$1.06 per minute while charges for mobile-to-fixed were 63 cents. International calls received locally on mobile phones through Telecom Namibia were subject to interconnection charges of 59 cents per minute.

NCC ruled in July 2009 that termination rates should be standardised to 60 cents per minute and that this should fall to 30 cents by January 2011

This situation led to a battle, between MTC on the one side and Leo and Telecom on the other, which became heated and spilled over in public leading to the intervention of Minister Kaapanda in August 2008¹⁹. The situation was finally rectified when the NCC ruled in July 2009 that termination rates should be standardised to 60 cents per minute and that this should fall to 30 cents by January 2011²⁰. An independent study had found that the estimated cost of interconnection of an efficient operator is 24 cents²¹. Because more people called MTC from the Telecom and Leo networks than vice versa, the new unified charges meant that there continued to be net transfers to MTC from Telecom and Leo, though less so than before.

Leo

The longer Leo struggled to gain a foothold in the market, the greater the odds became that a larger player would come in and buy it. In August 2008 Leo announced it was changing its management agreement with TMP. Then in January 2009 the company suddenly announced it was to be bought by Telecelglobe – part of Egypt's Orascom Group – for N\$580 million. The deal went through and a new management team was quickly installed with Pakistani national Soban Pasha as MD. Later in that year in September, CellOne was rebranded as Leo – Swahili for “today”. However, despite numerous offers and more intense marketing, it was not clear by the end of 2009 that Leo was starting to become solidly profitable.

Expansion Beyond Namibia's Borders

In the search for new markets, Telecom Namibia has extended its reach into neighbouring countries. In 2004 it entered into an agreement with Mundo Startel of Angola. In 2005 Telecom teamed up with VSNL/Tata to become the Second National Operator in South Africa. In its latest annual report²², Telecom admitted it was struggling in the Angolan joint-venture but remained upbeat about Neotel where the consortium had successfully raised the funding to build the network. In 2009 Telecom and MTC jointly participated in the West Africa Cable Systems (WACS) linking Europe to various points on Africa's western coast including South Africa. In need of additional funding, Telecom decided to tap the local bond market in 2008 and set about following NamPower's example by seeking a credit rating from Fitch Ratings. It received an investment grade rating based on a Namibian Government guarantee and by the end of 2009 had succeeded in raising N\$147 million out of a N\$600 million note programme.

¹⁸ See Stork & Deen-Swarray, 2007.

¹⁹ See “Leo, Telecom Gang Up on MTC”, *The Namibian*, 27 August 2008.

²⁰ See “NCC Slashes Mobile Charges”, *The Namibian*, 8 July 2009.

²¹ Research ICT Africa.

²² Telecom Namibia Annual Report 2007/08.

Policy & Regulatory Issues

The most important changes in Namibia's telecoms sector came about in the absence of a clear and effective regulatory framework

Many of the most important changes in Namibia's telecoms sector – the entry of Portugal Telecom, Leo, Orascom and Telecom's Switch – came about in the absence of a clear and effective regulatory framework. The Communications Bill, first mooted in the Policy of 1999 and first discussed in 2002, was only passed by Parliament in October 2009²³. Part of the reason for the delay lay in turf battles between the Ministries of Works, Transport and Communication and Information and Broadcasting, an issue that was finally resolved with the creation of the Ministry of Broadcasting and Communication Technology in 2008. Further delays came about due to Government's insistence that security issues be included within the Bill, giving the security services wide ranging powers to record messages and conversations.

The new Act contains many of the key ingredients required to develop a modern telecoms sector. It makes provision for an independent arms-length regulator, the Communications Regulatory Authority of Namibia (CRAN), financed by licence fees and a levy on the gross turnover of telecoms companies. It gives CRAN the powers to regulate both mobile and fixed line operators and the ability to grant technical and service neutral licences, that is, licences which are not dependent on any particular technology (fixed or wireless) or service. It will guarantee number portability, which will allow customers to move operator without having to change their numbers. The new Act stipulates further that telecoms companies must be 51% Namibian owned. Although this may make sense from a nationalistic and political perspective, this virtually dictates continued Government involvement in the sector since few private sector players in Namibia would have the means to raise a 51% stake in a telecoms company.

A four person CRAN board was appointed by Cabinet for three years and announced in December 2009. It consists of the chair, Lazarus Jacobs, deputy chair Hilma Hitula, Tulimevava Mufeti and Tylvas Shilongo. Jacobs is the director and shareholder of Paragon Investment Holdings. Hitula is the director of Hitula Property Investments and deputy chairperson of Lorentz Angula. Mufeti is Project Manager: Management Information Systems Development at the University of Namibia (UNAM), and Shilongo is Senior General Manager at the Namibia Central Intelligence Service. However, by May 2010 the Communications Act had not come into force, the post of CEO had not been filled and the NCC remained the de facto regulator.

CRAN

The NCC has historically been a small, weak institution funded from the state budget under the vote of the Ministry of Information and Broadcasting. It employs just three professionals and has a budget of N\$5.3 million which is vastly underspent. It has occasionally shown its teeth by, for example, refusing to allow MTC to raise prices since October 2004 (since when MTC has gone on to make even greater profits). Under the new Communications Act this position of weakness is likely to change with the establishment of CRAN. There is a danger it could become yet another bloated parastatal agency with a large budget yet still unable to attract the skilled personnel required for telecoms regulation. One estimate²⁴ suggests a 0.5% levy on Telecom and MTC would generate N\$9.58 million, sufficient for proper regulation and enough to cover the outsourced research and international consultants required. By way of comparison, the Botswana Telecommunications Authority (BTA) established in 1996, which already has a broader mandate than the NCC, generated revenue of P71 million in the year ending 31 March 2009 and employs some 64 people²⁵ of which 39% are post-graduates. The Independent Communications Authority of South Africa (ICASA) established in 2000, has a budget of ZAR 240 million and employs some 335 people²⁶. With its board in place by the end of 2009, CRAN will soon be in a position to start hiring. The caliber of its CEO and the staff it hires will be critical in determining its future performance.

²³ Communications Act 2009, Act No. 8 of 2009.

²⁴ Stork and Esselaar (2006).

²⁵ See BTA Annual Report 2009 www.bta.org.bw

²⁶ See ICASA Annual Report 2008/09 www.icasa.org.za

Ownership

In contrast to times past, when it could be argued that state ownership was necessary to prevent inefficient pricing by a natural monopoly, there is no longer sound economic logic in favour of state ownership in a sector where genuine competition can be created through intelligent regulation. As long as government remains a shareholder in one or more competing companies, there will always be an incentive to make regulatory decisions on the basis of what is best for the shareholder rather than the consumer and the national economy. Government has derived significant income from its shareholdings in both Telecom and, to a far greater extent, MTC. Some have argued that this has constituted "taxation by the back door". After all Government managed to buy 49% of MTC for N\$500 million and just two years later sell 34% for N\$1.02 billion. In this situation, it will be hard to create a CRAN that is genuinely and credibly independent. Government's record of allowing the NCC to operate as an "arms length" regulator is checkered. Economic principles suggest that any roadmap for the future should include the privatisation of Telecom Namibia and the further privatisation of MTC so that all three telecoms companies operate on a level playing field.

Following the buy-back of 49% and the sale of 34% in MTC, the 15% difference was supposedly set aside to promote BEE, but this issue has fallen rather silent in recent years. A listing on the Namibian Stock Exchange (NSX) to open up ownership to the general public is also an option that could be considered. But a situation whereby one player is fully Government owned (Telecom), one partly Government owned (MTC) and one fully privately owned (Leo) could raise difficulties in a situation where the regulator may not be impartial.

Fixed-mobile Substitution

Changing technology is forcing people to ask whether there is any longer a need for a fixed line telecoms operator such as Telecom Namibia. Telecom has some 148,000 customers, compared to MTC's 1.3 million. Given the right products and pricing, the market in Namibia may include anything up to 1.5 million people, the entire adult population of the country. Mobile telephony has the potential to deliver telecoms services far more cheaply and effectively to many more people than fixed line telephony and this has been accentuated with the arrival of 3G. As far as the retail market is concerned, the future appears to be wireless. Unless Telecom transforms itself into a fully-fledged mobile operator or adapts to delivering specialist services for business, its future looks bleak. It did not succeed in clinging on to its monopoly provision of international traffic as both MTC and Leo were awarded international voice licences in July 2009. The expectation of declining international call revenues may explain its attempt to enter the mobile market via fixed-wireless CDMA as well as past talk of restructuring NPTH and taking over 51% of MTC²⁷. The critical question is, will Government move to try and protect Telecom, allow it to merge with MTC or transform itself at some stage into a fully-fledged third mobile operator?

Telecom Namibia fixed-line revenues will break away as more and more people rely entirely on wireless

Competition

Namibia is moving from a model which relies on state-owned monopolies to provide telecoms services, to a model which relies on competing companies with significant private shareholdings to provide them. As some observers have already pointed out²⁸, it will be difficult for Leo to start a price war with such an entrenched and cash-rich player as MTC. Furthermore, Leo depends on cooperation with MTC to share its existing infrastructure. There is a danger that this relationship may become a bit too cosy. Collusion, implicit or explicit, could be the result, especially if the regulator remains weak and lacks the technical capacity to promote competition. But the prospect of Leo making money in Namibia's small market against an entrenched player with a 14-year track record and which already claims to have 1.6 million customers is by no means certain. The real money is to be made with the 100,000 or so contract customers that exist in Namibia. Unless these customers are really fed up with MTC (and there may be significant dissatisfaction due to lack of capacity especially at certain times of the week) it is hard to see Leo stealing enough market share to make money.

²⁷ See "MTC, Telecom Cross Swords", *The Namibian*, 14 June 2006

²⁸ See Stork and Deen-Swarray (2007)

NPTH

Unbundling of Telecom Namibia, NamPost and MTC would be a logical step in the process of liberalisation and subsequent privatisation of the sector

Cabinet memoranda at the time viewed NPTH as a temporary vehicle allowing Telecom to subsidise NamPost, which was expected to take far longer to start breaking even. As things turned out, NamPost reached profitability far earlier than expected. Over time all three NPTH subsidiaries developed capabilities and assets in areas that were originally envisaged for NPTH, although all property used by the three subsidiaries is owned and maintained by NPTH. A key question is what NPTH functions should be in future. A SIDA²⁹ concludes that “it has for some time been difficult to imagine valid reasons for NPTH’s continued existence, as evidenced by the initiation of Cabinet level enquiries already in 1998 into the possible unbundling of NPTH’s operating companies”. The NPTH is unnecessarily duplicating cost structures and presents a ‘value trap’ considering that it has been paying dividends to government subsequent to its subsidiaries declaring their own dividends. However, NPTH is hardly a big expensive structure as its annual reports testify. Its property management activities pay for themselves and appear to be highly valued by its subsidiaries. Much of the past lack of pass through of dividends to the exchequer has to do with investment or buying back shares from previous shareholders, notably Telia and Swedfund. The recent payment of N\$648 million to Government out of the N\$1.02 billion paid by Portugal Telecom came about due to the need to repay a N\$300 million loan for the buy-back of the 49% in 2004³⁰. Of greater concern from a governance point of view is that the CEO of NPTH is none other than Frans Ndoroma, the MD of Telecom Namibia. A significant “competitor” of MTC therefore has relatively open access to the mobile operator’s finances and strategies. Unbundling of Telecom Namibia, NamPost and MTC would be a logical step in the process of liberalisation and subsequent privatisation of the sector.

²⁹ Resource Paper 2 Cooperation between Namibia and Sweden in the Transport and Communications Sectors: Commercialisation in the Namibian Transport and Communications Sectors, Herman Marais February 2006.

³⁰ NPTH used N\$200 million in cash from dividends and borrowed a further N\$300 million to purchase the 49% from Telia and Swedfund.

Namibia's Telecommunication Sector Performance

Namibia's telecommunication sector performance review is conducted from four perspectives: the Namibian economy, operators, consumers and regulators and policy makers. Figure 1 graphically displays the components of the sector performance review. First the link between sector performance and policy and regulation is evaluated, followed by an analysis of the contribution of the telecom sector to Namibia's economy. The third section deals with the operators' bottom line,, their financial performance and incentive to invest. The following section then discusses price developments and consumer interest, and the impact of regulatory interventions.

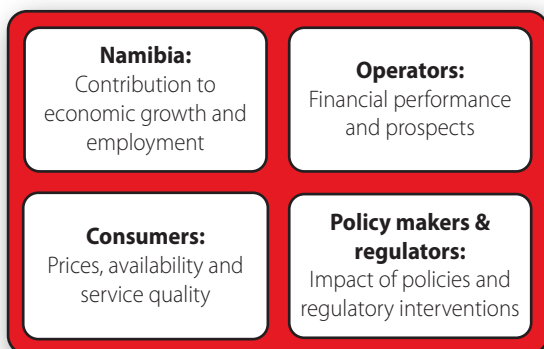


Figure 1: Components of the sector performance review

Link between Policy, Regulation and Sector Performance

The diagram below illustrates the links between policy, regulation and sector performance. Parliament passes the laws that constitute the legal framework of a country. The legal framework establishes the regulator and defines its powers and duties. Parliament and the Ministry of Information & Communication Technology develop the overall strategy for the telecommunications sector – what its objectives are and how it is going to encourage investment. These become concretised in the form of laws. The implementation of these laws (and their interpretation) is left to the regulator. The Minister can also influence regulation through policy directives. Policy directives are meant to provide greater clarity for the regulator (and the public) on what the policy for the sector means and how the law should be interpreted.

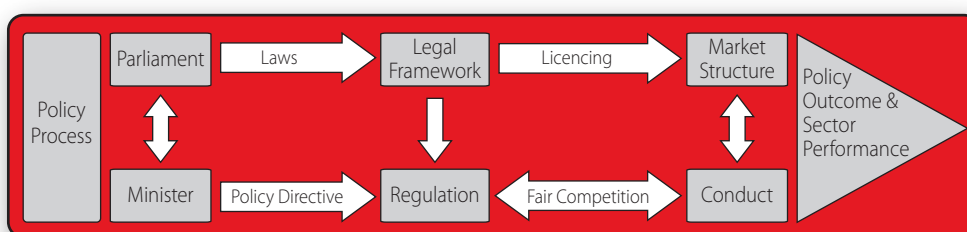


Figure 2: Link between policy regulation and sector performance

Directives are not intended to be specific pieces of legislation – that would impinge on the regulator's independence. Four components (parliament, the Minister, the legislative framework and the regulator) have a direct impact upon the structure of the market (how many operators there are) and, in turn, upon the conduct of these players. The most obvious mechanism that determines market structure is the licensing process. The more operators that are licensed, the greater the likelihood that there will be competition. However, if a market has been dominated by a limited number of players (as is the case in most countries because telecommunication was historically considered a natural monopoly) then competition policy plays a key role in ensuring that players do not abuse their dominant positions. Regulation can therefore have a significant influence on the conduct of players as well. Each of these components impacts upon sector performance. Analysis of the telecom sector that ignores any of these components runs the risk of being too simplistic. For example, the assumption that operators are entirely at fault for high prices

Namibia's Telecommunication Sector Performance

tends to ignore the policy choices, legislative framework and regulatory competence of the institutions that created the framework for telecom companies to compete in.

Parliament passed a new Communication Act in November 2009, which requires the Minister to announce its commencement date. This had not happened by May 2010. The new Act and its implementation by the new regulator, CRAN, will impact on the sector performance, and will be analysed in the next sector performance review. This review is based on the existing legislation and regulation through the NCC and the line Ministry for Telecom Namibia (MICT).

Namibia

The contribution of the communication sector to GDP has steadily increased during the past 18 years (see Figure 3). A remarkable jump in GDP contribution is notable between 1999 and 2000, which is linked to prepaid mobile taking off in Namibia.

The contribution of the telecom sector to GDP has increased consistently over the past 18 years

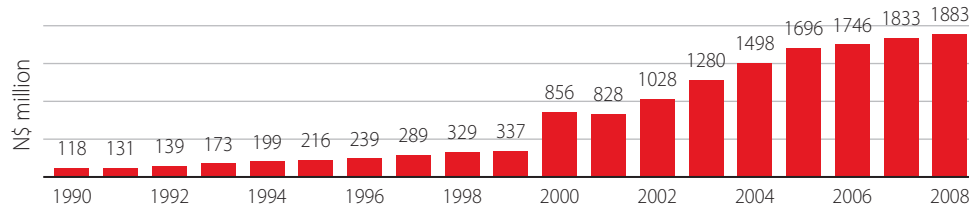


Figure 3: GDP contribution in constant 1995 Prices - N\$ million (source: national accounts, CBS)

The percentage contribution to GDP, which depends on many factors outside the communication sector, has been around 3% in the period since 2002.

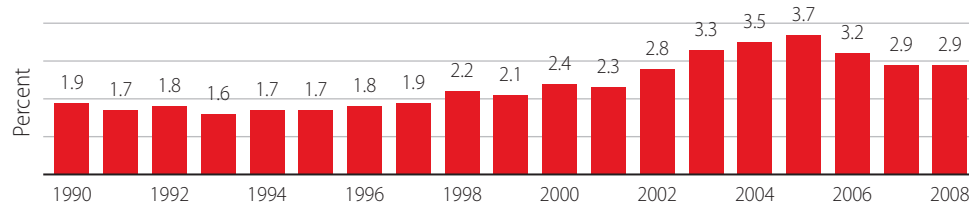


Figure 4: GDP contribution of Post and telecommunication in % (source: national accounts, CBS)

MTC employment increases from year to year while Telecom Namibia's staff numbers decrease. Total employment by the telecom sector is likely to have increased when considering the employment that stems from retail businesses selling handsets and airtime, as well as other equipment suppliers and service companies.

Operators

Telecom Namibia's revenues have increased slowly but steadily over the past 15 years. Company profits, return on equity (ROE) and profit margins have fluctuated and are much lower than they used to be in 2003 to 2005. The recent ROE would hardly be enough to compensate an investor for the value lost due to inflation. What is clear is that Telecom Namibia is struggling to become a flourishing and growing business. Its strategy seems to focus more on preserving current revenue streams than growing the business. A key mistake that seems to be made by Telecom Namibia is to link its wholesale and retail businesses. Using wholesale prices to protect retail revenues leads to sub-optimal business performance and holds back economic development. Yet this mistake is being made around the world by incumbents, over and over again. As a principle, wholesale and retail should be seen as separate profit centres, both trying to maximise profits on their own. ADSL could have been rolled out much quicker than it was, for example. By the end of 2009 merely 6000 ADSL connection had been installed. Wholesale would try to push out as many ADSL connections as possible, whether to Telecom Namibia's retail section or any other reseller in such a set-up. That helps to reduce waiting times for installations and lets the retail arms compete against other resellers. If resellers then sold more than Telecom Namibia's retail arms, this would be an indication that they are doing something better and that Telecom Namibia has to improve. Without

Namibia's Telecommunication Sector Performance

competition the areas of improvement are not obvious and incentives to improve services are minimal. What counts is not market share (100% of ADSL connections) but the bottom-line. Telecom Namibia needs to learn from its mistakes and the mistakes of other incumbent operators and create competition within the company to improve efficiency and profitability. It would, for example, have been better to have a continuous revenue stream from 20,000 ADSL connections, 80% installed by resellers, than having revenues from 6,000 ADSL lines, all installed by Telecom Namibia. Retail would, in this example, only have sold 4,000 ADSL lines and resellers 16,000. But wholesale would make a lot more money. The fact that resellers did better would then help to improve Telecom Namibia's retail business. The same would be true for leased lines.

Expanding to neighbouring countries may be a very profitable strategy if supported by a growing business at home. A crumbling business at home might make such strategies risky. Neotel, for example, is unlikely to turn into a cash cow any time soon. Little relief can hence be expected from investments to compensate for falling fixed-voice and international call revenues. Key for Telecom Namibia will be to turn the domestic market into a growth market. Less relevant for that will be how things have been done in the past and more relevant will be how things can be done to grow customers and turnover, in both retail and wholesale.

Table 4: Telecom Namibia (company): Key Financial Indicators

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Revenue (N\$m)	652	764	896	981	1,020	1,055	1,058	1,061	1,081
Taxation (N\$m)	21.0	16.2	27.9	40.7	48.2	48.1	61.8	27.9	33.1
Net profit after tax (N\$m)	35.3	26.6	47.5	69.9	121	84.6	112.3	23.2	46.9
Total assets (N\$m)	1,010	1,086	1,189	1,290	1,391	1,267	1,781	2,040	2,231
Shareholders' Equity (N\$m)	375	395	419	480	566	627	980	1,015	1,062
Dividend (N\$m)	-	8	3	8	12	24	17	0	0
Asset Turnover	1.55	1.42	1.33	1.32	1.36	1.20	1.68	1.92	2.06
Return on Equity	9.4%	6.7%	11.3%	14.5%	21.4%	13.5%	11.5%	2.3%	4.4%
Financial Leverage	2.684	2.751	2.84	2.686	2.457	2.022	1.817	2.009	2.1
Profit Margin	5.4%	3.5%	5.3%	7.1%	11.9%	8.0%	10.6%	2.2%	4.3%
DELs in 1000	110.2	117.4	121.4	127.6	136.4	139.0	136.2	138.2	
Staff	1,667	1,654	1,574	1,548	1,516	1,463	1,306	1,069	1,025

Source: Telecom Namibia Annual Reports

A return on equity of below 5% and limited growth prospects would not be attractive to a private investor

MTC's return on equity was very high at around 50% until 2005/6, when the arrival of competition in the mobile telephony sector led to a drop to a still-high 37% in 2006, 34% in 2007 and 32% in 2008. The same trend can be observed for profit margins, which peaked in 2005 and have since then begun to decline. MTC is a very good investment, not just in comparison with Telecom Namibia but generally. It is run profitably and manages to grow its market in terms of subscribers and turnover from year to year while expanding its network, upgrading to latest technologies and increasing the value of the company.

Selling a 34% share of MTC to Portugal Telecom has been profitable for both, the government and Portugal Telecom. A model that could also be envisaged for Telecom Namibia. Seeking a partner with global technical and management expertise could still turn Telecom Namibia into a cash cow whilst better serving the Namibia's development goals.

MTC spectacularly underestimated price elasticity of demand, both for access and usage, when it still operated as a monopoly. Competition forced it to lower prices and introduce new lower priced products. MTC's declared strategy is to maintain revenues not by lowering prices but offering more for the money. This has taken the form of doubling bundled minutes or recharges with on-net airtime. These are effective price decreases for the consumer as the OECD basket methodology in the next section shows.

Namibia's Telecommunication Sector Performance

MTC achieves record results despite termination rate cuts

Table 5: MTC: Key Financial Indicators

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Revenue (N\$m)	191	262	372	504	687	769	937	1,113	1,232	1,390
Shareholders' Equity (N\$m)	81	124	194	297	451	646	903	999	1,136	1,153
Taxation (N\$m)	15.0	25.8	47.6	74.2	119.0	145.5	171.3	177.0	180.7	198.8
Net profit after tax (N\$m)	39	56	99	150	235	293	337	340	358	388
Total assets (N\$m)	241	345	429	553	745	915	1,169	1,329	1,608	1,632
Dividend (N\$m)	12.5	12.5	30.0	47.5	80.0	110.0	80.0	245.0	220.8	369.5
Dividend as % of after tax profit	32.2%	22.3%	30.4%	31.6%	34.0%	37.5%	23.7%	72.1%	61.7%	95.4%
Return on Equity	47.9%	45.0%	50.9%	50.7%	52.1%	45.4%	37.3%	34.0%	31.5%	33.6%
Profit Margin	20.3%	21.3%	26.5%	29.9%	34.2%	38.1%	36.0%	30.5%	29.0%	27.9%
EBITDA margin						61%	60.2%	52.2%	50.9%	53.8%
Active SIM cards in 1000	71	106.6	143.4	223.7	343.6	403.7	555.5	743.5	1,009	1,284
Staff			156	190	229	276	272	296	397	416
Monthly ARPU in N\$	224	205	216	188	167	159	141	125	102	90
<i>Source: MTC Annual Reports</i>										

MTC's average revenue per user (ARPU) dropped from N\$283 in 1999 to N\$90 in 2009, a development expected for an expanding market since new subscribers are predominantly from lower income categories. An ARPU of N\$90 or about 12US\$ is still incredibly high when compared with budget telecoms from Asia that run their businesses profitably based on a below 2US\$ ARPU model.

That might provide an idea for an investor for Telecom Namibia, a company from India or Sri Lanka that runs CDMA based on a below 2US\$ business model. It would not mean that MTC and Leo would in such an event emulate such a business model and leave Namibia with budget operators only. The budget operator could occupy a niche for the bottom end.

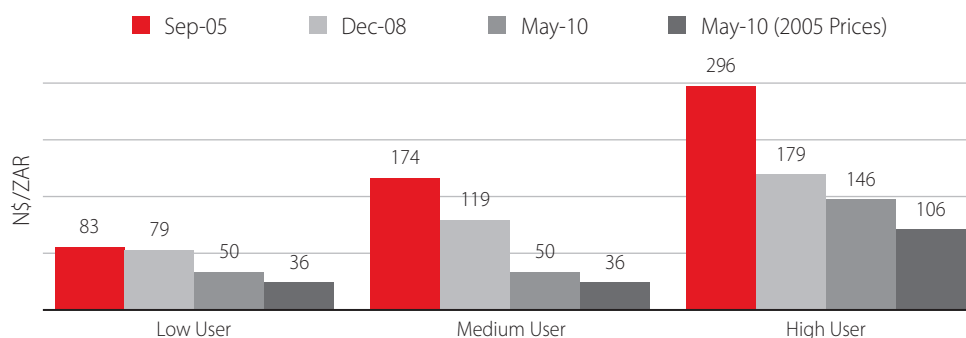
Consumers

In October 2005, in an *Insight Magazine* interview, Bengt Strenge, (Managing Director of MTC) dismayed by a price comparison, stated: "We can reduce prices and thus reduce dividends ... have no capacity to reinvest ... operate as an SOE that requires regular government subsidies ... shun all areas of the country that don't offer relatively quicker returns on investment." Since then prices have dropped by more than half in real terms (see Figure 5), while subscriber numbers, base stations and dividends paid have tripled. Investment and after tax profits were considerably higher in 2009 than they were in 2005, despite lower prices. Competition leads to lower prices and lower prices lead to more subscribers. "Sell little dearly or more cheaply" holds.

An international comparison conducted by Research ICT Africa shows that Namibia fares well. The data is collected through a webpage (www.researchictafrica-data.net) and comprises 184 mobile prepaid products from 112 operators from 26 countries. The OECD mobile pricing basket methodology of 2006 was implemented with minor adaptations. MMSs were, for example, not included because they have not taken off in Africa. Friends and family offers or preferred number plans, which offer unlimited calls to certain numbers on the same network, were not taken into account as they make the process too complex. Promotions for particular days or for certain recharge denominations were also not taken into account.

Tables 6 and 7 compare the cheapest prepaid product available from incumbent operators according to the 2006 definition, to the cheapest prepaid product available in a country. The difference between these methodologies represents the pressure of competition within these countries and indicates who offers the cheapest mobile prepaid offers.

Namibia's Telecommunication Sector Performance



Namibians pay effectively only a third of what they used to pay in September 2005

Figure 5: MTC cheapest product (prepaid and postpaid for OECD usage baskets [2006] definition) in N\$

Other characteristics have been included in table 7 such as the number of operators and years since last market entry to demonstrate that there are no linear relationships between individual characteristics. A difference between the cheapest product in a country and the cheapest product from dominant operators may measure the competitive pressure but may also have no explanatory power. In Botswana, for example, the dominant operator, Mascom, is also the cheapest operator. Mascom probably became the dominant operator because of its price leadership. Orange and Mascom were licensed at the same time.

Price developments and competitive pressure are a function of many factors and are path dependent. Applying the basket methodology to all operators and analysing the differences between cheapest and dominant operator adds one more perspective and provides regulators with one more tool in their toolbox to monitor the level of competition in the sector.

Table 6: Cost of OECD mobile baskets expressed in US\$ (source: researchictafrica-data.net), sorted by price difference

Feb 2010	Cheapest prepaid product in the country			Cheapest prepaid product from dominant operators			Percentage by which dominant operator is more expensive than cheapest in country		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Botswana	5.04	10.28	20.67	5.04	10.28	20.67	0%	0%	0%
Ethiopia	3.74	7.59	14.98	3.74	7.59	14.98	0%	0%	0%
Mozambique	7.45	15.07	29.88	7.45	15.07	29.88	0%	0%	0%
Senegal	6.12	12.31	24.25	6.12	12.31	24.25	0%	0%	0%
South Africa	7.64	15.38	29.63	7.64	16.12	33.13	0%	5%	12%
Tunisia	5.06	10.24	20.19	5.06	10.24	20.19	0%	0%	0%
Zambia	6.57	13.28	25.99	6.60	13.54	26.37	0%	2%	1%
Cameroon	8.59	16.42	30.45	9.30	17.91	33.22	8%	9%	9%
Uganda	6.33	12.90	24.05	6.95	13.90	26.85	10%	8%	12%
Burkina Faso	11.04	22.65	45.19	12.54	25.98	52.52	14%	15%	16%
Côte d'Ivoire	7.00	14.34	28.88	8.15	16.34	31.59	17%	14%	9%
Ghana	2.29	4.36	8.01	3.04	6.10	12.16	33%	40%	52%
Benin	4.92	11.05	24.75	7.50	14.74	27.84	52%	33%	12%
Kenya	3.35	6.37	11.42	5.93	11.82	22.78	77%	86%	100%
Namibia	5.06	10.74	22.19	8.96	18.27	36.19	77%	70%	63%
Rwanda	3.74	7.94	16.59	6.87	13.63	26.45	84%	72%	59%
Nigeria	3.63	7.58	15.48	7.76	15.85	32.13	114%	109%	108%
Tanzania	2.93	6.06	12.24	7.26	15.24	31.84	148%	152%	160%

Table 6 indicates that the competitive pressure in Namibia is high. The incumbent is 77% more expensive than the cheapest product in the market (Switch from Telecom Namibia) for the OECD low user basket. For the medium and higher user basket MTC is 70% and 63% more expensive.

Namibia's Telecommunication Sector Performance

Table 7: Link between price differences between incumbents and cheapest products available in a country and various explanatory factors

Feb 2010	Difference (% = difference / dominant price)			Operators	Years since last entry	Cheapest Operator for low user basket	Dominant Operator	Mobile penetration (ITU ICT eye for 2008)
	Low	Medium	High					
	%	%	%					
Botswana	0%	0%	0%	3	2	Mascom	Mascom	77.34
Ethiopia	0%	0%	0%	1	11	ETC	ETC	2.42
Mozambique	0%	0%	0%	2	7	mCel	mCel	19.68
Senegal	0%	0%	0%	3	1	Orange	Orange	44.13
South Africa	0%	5%	11%	4	4	MTN	MTN & Vodacom	90.60
Tunisia	0%	0%	0%	2	8	Tunisiana	Tunisiana	84.59
Zambia	0%	2%	1%	3	7	MTN	Zain	28.04
Cameroon	8%	8%	8%	2	10	Orange	MTN	32.28
Uganda	9%	7%	10%	4	2	Uganda Telecom	MTN	27.02
Burkina Faso	12%	13%	14%	3	9	Telcel	Zain	16.76
Côte d'Ivoire	14%	12%	9%	4	3	Moov	Orange & MTN	50.74
Ghana	25%	29%	34%	5	3	Tigo	MTN	49.55
Benin	34%	25%	11%	5	3	Libercom	MTN & Moov	41.85
Kenya	44%	46%	50%	3	2	Orange	Safarico	42.06
Namibia	44%	41%	39%	3	1	Telecom Namibia	MTC	49.39
Rwanda	46%	42%	37%	3	1	Rwandatel	MTN	13.61
Nigeria	53%	52%	52%	7	4	Starcomms	GloMobile & MTN	41.66
Tanzania	60%	60%	62%	9	5	Benson	Vodacom	30.62

South Africa and Botswana are still ahead in mobile teledensity

The falling prices of mobile communication in Namibia as a result of competition have been mirrored in other countries, some being even more successful. Figure 6 compares the cost of prepaid products across 18 African countries covered by Research ICT Africa. Namibia occupies the middle of the field in terms of cheapest products available in the country but is at the top end of the cheapest product available from dominant operators, in this case MTC. MTC is the third most expensive prepaid operator in the 18 country comparison, surpassed only by Cameroon and Burkina Faso. This is significant since it means the majority of people pay high prices, with MTC having a market share of around 80%.

The total subscriber numbers reported by operators (more than 1.6 million) are likely to overstate the actual number of mobile users considerably. The need or desire for duplicated SIM cards seems to have increased in Namibia for several reasons. First, postpaid MTC subscribers cannot transfer airtime to prepaid subscribers due to the VAT that is charged on prepaid airtime and the involved complexity. Sending airtime to family members and friends would require a postpaid subscriber to purchase a prepaid card as well. A second reason is the number of different promotions run by operators. Namibians may not only hold prepaid SIM cards from different operators but even multiple SIM cards from the same operator to utilise promotions.

Namibia's Telecommunication Sector Performance

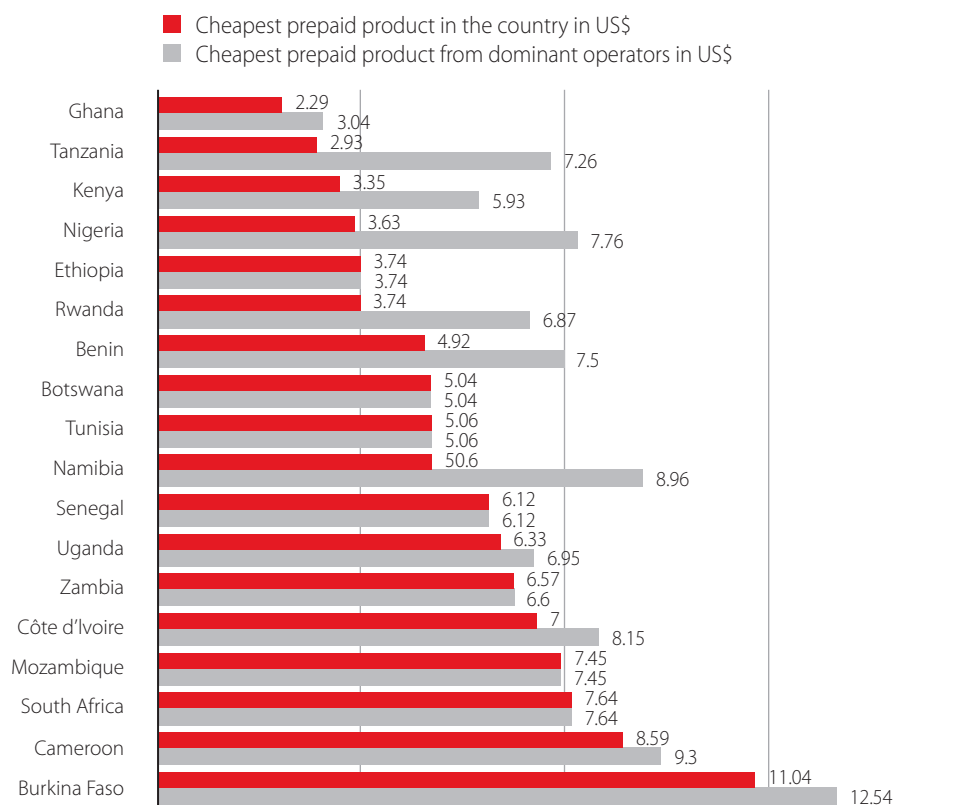


Figure 6: Prepaid prices for OECD low user basket in US\$

Policy Makers & Regulators

The years 2008 and 2009 have been record years in terms of policy making and implementation:

- A single ministry has been put in charge for sector policies instead of having one for fixed and one for mobile telephony;
- New ICT policies were formulated;
- A new communications Act was passed by parliament;
- A termination rate dispute was settled within nine months, setting standards for the region.

Minister Joel Kaapanda has driven widespread reforms within the sector. The second mobile licence and subsequent competition in the mobile sector in 2006 was the first game changer. Enforcing the licence conditions of Leo and MTC (termination rates based on cost) in 2009 added to that new game being played more fairly.

During the termination rate debate in 2009, MTC argued that its EBITDA (Earning before Interest, Tax, Depreciation and Amortisation) margin would drop to 36% if termination rates were reduced to the cost of an efficient operator. The termination rates have since then dropped to N\$0.4 from N\$1.06, while MTC's EBITDA margin rose from 50.9% in 2008 to 53.8% in 2009. The financial year ending September 2009 only covers three months after the first termination rate drop. The 2010 financial report will reveal more. One thing is clear however: MTC will invest more, not less as threatened, since the lower termination rates will lead to fairer competition and hence the need to stay head of the field. MTC announced in its 2009 financial report investments into 4G technology (LTE = Long Term Evolution) of N\$180 million and N\$ 115 million into the West African Cable System.

Also remarkable is that MTC's user numbers increased further, to nearly 1.3 million subscribers. Leo and Telecom Namibia also managed to attract new customers, indicating that the lower prices led to an expansion of the market.

MTC's prices have equally not increased as predicted by itself but have instead decreased or remained the same. Figure 5 shows the cost of OECD usage bundles for the cheapest postpaid or prepaid product of MTC. The prices for Tango Prepaid per second were slashed by more than half

Namibia's Telecommunication Sector Performance

in December 2009, and a new substantially cheaper postpaid product was introduced in early 2010 effectively reducing MTC prices again. Telecom Namibia and LEO also offered new products and cheaper prices.

Retail prices for all products from all operators have remained constant or have dropped after the termination rate reductions

Table 8: MTC key performance indicators

	2005	2006	2007	2008	2009
Subscribers	403,743	555,501	743,509	1,008,658	1,283,530
EBITDA Margin	61%	60.2%	52.2%	50.9%	53.8%
After-tax profit in million N\$	292.9	337.2	339.6	356.2	387.5
Dividend paid in million N\$	110	80	245	221	370
Dividend payment as share of after-tax profit	37.6%	23.7%	72.1%	62.0%	95.5%
34% of dividends in million N\$			83.3	75.1	125.8

Figure 7 shows the cost of the OECD low user basket prior to and after two termination rate reductions for MTC. None of MTC's product increased in price. The OECD basket methodology does not capture recent specials and promotions run by MTC, such as 100 free SMS and doubling up of prepaid airtime, that also reduce the cost of usage. Telecom Namibia not only reduced its off-net rates following the termination rate reductions, but also on-net prices, leading to prepaid prices for the cost of the low user bundle being only a third in March 2010 compared to April 2008.

Leo restructured its product offerings and added nine new postpaid products. The new postpaid products are different in nature and cannot be compared to the basket price of the postpaid products prior to the termination rate cuts. Figures 9 and 10 thus display postpaid and prepaid calling rates directly. None of the tariffs increased. This shows that there is clearly no waterbed effect in Namibia, not even for a single product or tariff.

The results for Namibia, the telecom sector and consumers have been spectacular. Lower prices through competition have let to an expansion of the market.

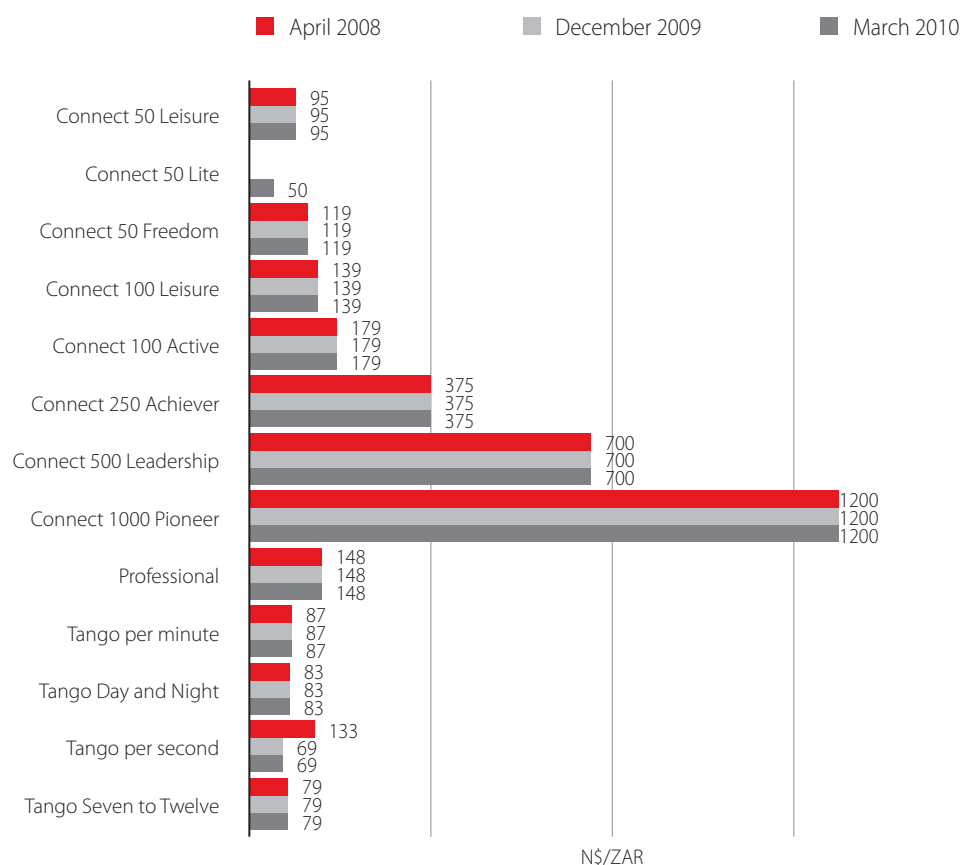


Figure 7: Cost of OECD low user basket in N\$/ZAR for MTC

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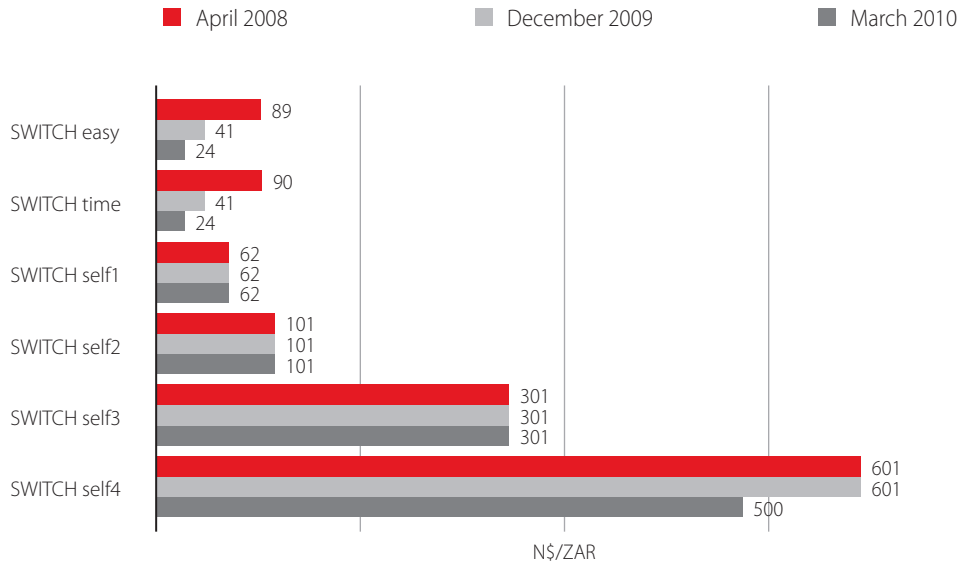


Figure 8: Cost of OECD low user basket in N\$/ZAR for Telecom Namibia

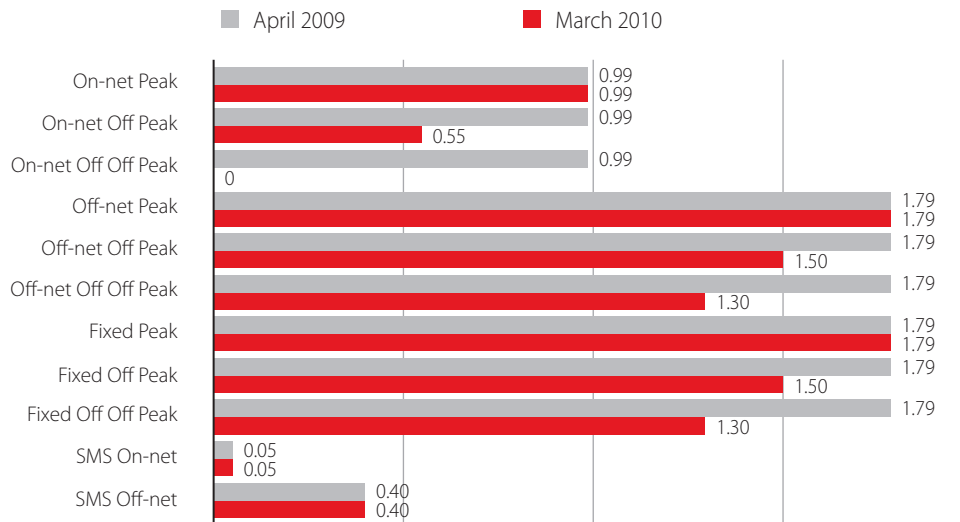


Figure 9: Leo's postpaid rates compared

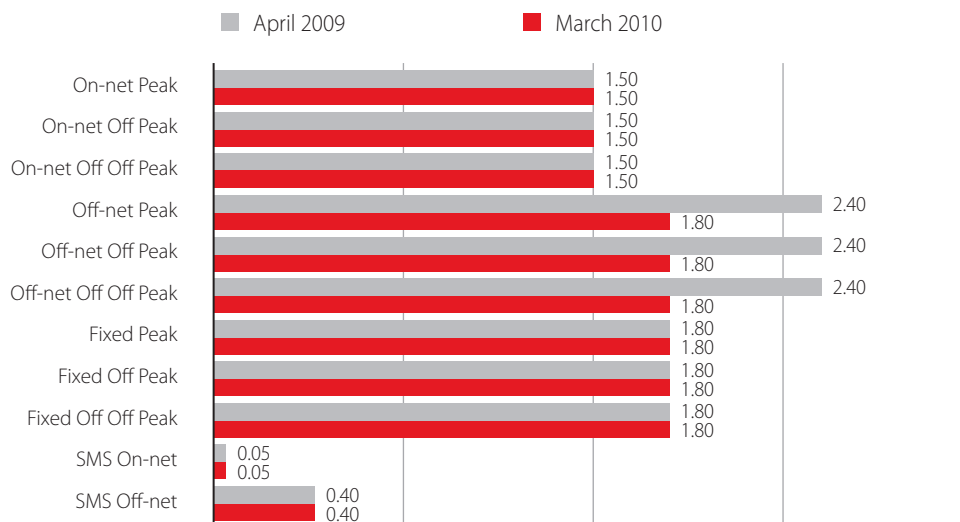


Figure 10: Leo's prepaid rates compared

Termination rate reductions did not lead to a waterbed effect

Telecommunication Regulatory Environment (TRE)

The perception of the regulatory environment in Namibia has improved dramatically between 2006 and 2009

Professionals and stakeholders from Namibia’s telecommunication sector and civil society were requested to make their assessments of the Telecom Regulatory Environment (TRE) for the period 2008 to 2009. The TRE is a tool for assessing the performance of the policy and laws affecting the telecom sector and the various government entities responsible for implementation. The TRE scores are based on perceptions and need to be assessed against actual developments in the sector (subscriber numbers, prices, dispute resolutions, changes in laws and policies). The TRE can be used by regulators and policy makers to assess their own performance and identify areas for improvement, and for investors to assess regulatory risks in a country.

The TRE is assessed for the fixed-line, mobile and broadband sub-sectors individually. The TRE is further assessed for seven dimensions: market entry, allocation of scarce resources, interconnection, regulation of anti-competitive practices, universal service obligation, tariff regulation and quality of service. Using the Likert Scale, each of the seven dimensions is rated on the scale from -2 to +2, with -2=Highly Ineffective and +2=Highly Effective. The responses are further analysed in three categories:

- Category 1: Stakeholders directly affected by telecom sector regulation (operators, industry associations, equipment suppliers, investors)
- Category 2: Stakeholders who analyse the sector with broader interest (financial institutions, equity research analysts, credit rating agencies, telecom consultants, law firms)
- Category 3: Stakeholders with an interest in improving the sector to help the public (academics, research organisations, journalists, telecom user groups, civil society, former members of regulatory and other government agencies, donors)

Figure 11 compares the results from the same survey conducted in 2006 with the one conducted at the end of 2009.

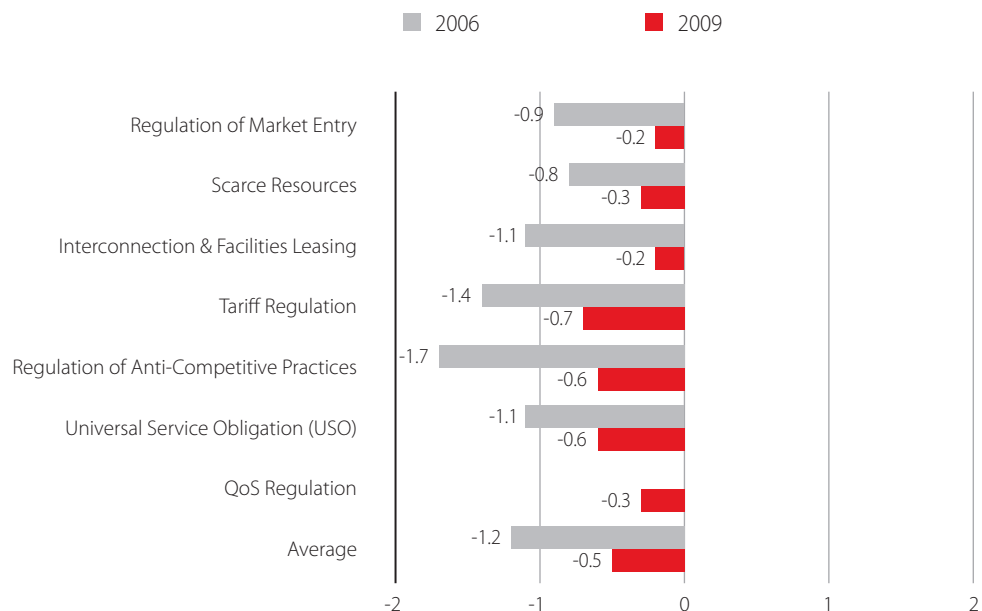


Figure 11: TRE scores of 2009 compared to 2006

The regulatory environment for broadband, fixed-line and mobile telephony is on average seen as being slightly ineffective (-0.5), which is a major improvement over the average rating of 2006 (-1.2, i.e between ineffective and very ineffective). The improvement in the score for interconnection regulation from -1.1 to -0.2 is remarkable, and can be attributed to the resolution of the termination rate dispute in 2009. Market entry has also been assessed more positively compared to 2006, with three mobile operators and several strong broadband providers now existent.

Telecommunication Regulatory Environment (TRE)

Figure 12 demonstrates that a large share of improved perception is due to developments in the mobile sector. Mobile telephony regulation fares slightly better than fixed and broadband, in particular for regulating interconnection and market entry.

The broadband (VANS) sector remains unregulated in Namibia. However, several insiders interviewed indicated that Telecom Namibia is effectively regulating it since it has the infrastructure monopoly. Regulatory intervention will be required if Telecom Namibia does not separate its wholesale from its retail business. Several stakeholders complained that Telecom Namibia offers leased lines to corporate clients for less than it is reselling to them, making it impossible for them to compete. Such practices warrant investigation and regulatory intervention when found to be the case.

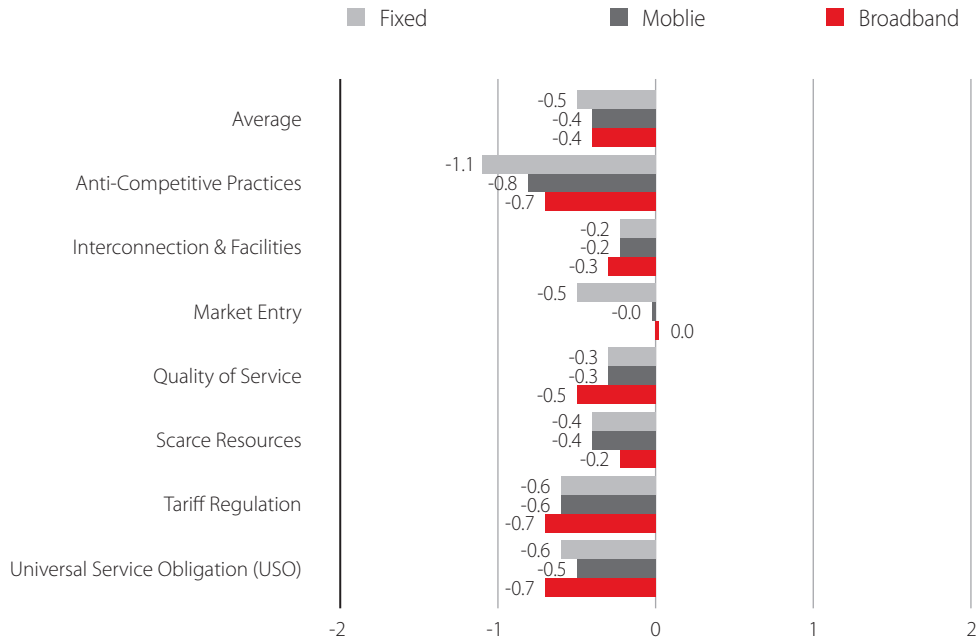


Figure 12: Perception of Namibia's Telecommunication Regulatory Environment by sector

Conclusions and Recommendations

Since the last sector performance review of 2006 a lot has changed in Namibia's ICT sector for the better. Namibia has now three mobile operators, a single ministry in charge of policy for the sector, new policies, a new Act, and soon also a new stronger and independent regulator. Namibia has started to catch up with South Africa and Botswana. Prices have more than halved for mobile telephony and Internet access, and broadband has found its way to Namibia in mobile and fixed versions.

The key findings of this report are that:

- The contribution of the communication sector to GDP has steadily increased during the past 18 years.
- MTC is flourishing while Telecom Namibia is increasingly struggling to deliver returns that would be expected from any owner other than government.
- Namibia fares well when comparing the cheapest prepaid product available in a country, occupying the middle of the field in a comparison of 18 African countries. However, for the cheapest product available from dominant operators, in this case MTC, Namibia is the third most expensive prepaid operator, surpassed only by Cameroon and Burkina Faso. This is significant since it means the majority of people pay high prices, with MTC having a market share of around 80% and the bulk of its subscribers being on prepaid.
- Lowering mobile termination rates towards the cost of an efficient operator increased competition in the sector and led to lower prices, more subscribers and an even better performance of the incumbent mobile operator, MTC, which claimed that the opposite would be the case. There certainly has been no waterbed effect.
- Perceptions of stakeholders regarding the regulatory environment improved dramatically compared to 2006, indicating a well received change.

Many challenges are still awaiting Namibia. Government would be well advised to sell a large share of Telecom Namibia to a strong operator with low cost CMDA expertise. Telecom Namibia will need to change course and focus on profitability or face the risk of becoming another indebted SOE with decreasing significance for Namibia's telecommunication sector.

The fixed-line sector may require regulatory intervention, separating wholesale from resale and the unbundling of the local loop to allow other operators access to Telecom Namibia's customers. That might sound like a threat to Telecom Namibia's existence but is likely to be a blessing. Similarly, competition has been a blessing to MTC, which is now a much stronger and more profitable company than it ever has been.

The new regulator, CRAN, needs to build regulatory capacity and establish credibility in the market. Licences and laws need to be enforced consistently and transparently. The regulator needs to balance consumers' interests and return on investment. Namibia's 13 year mobile monopoly has made that easy for the period 2006 to 2009. Lower prices increased consumer welfare and provided operators with more profits and reasons to invest. The future may hold trade-offs that need to be carefully balanced.

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Telecom Terms

3G – Third generation technology provides the ability to transfer both voice data and non-voice data. 3G often operates on different frequencies to 2G which has required mobile operators to build entirely new networks and licence entirely new frequencies at considerable cost. About 25 countries around the world have 3G networks. 3G requires different handsets to 2G.

ADSL – Asymmetric Digital Subscriber Line is a technology that allows faster data transmission over a copper cable than a conventional modem can provide. It is commonly used by users who require more bandwidth in one direction, such as faster downloads, but who do not require bandwidth in the other direction.

Base station – the infrastructure that determines the location and extent of a cell and transmits signals to and from handsets.

Broadband – a signalling method in telecommunications which handles a wide range of frequencies that can be divided into channels or bits. The wider the bandwidth, the more data can be carried.

CDMA – Code Division Multiple Access is a mobile digital radio technology that permits greater sharing of the same frequency channel and which has the advantage that a larger number of phones can be served by a smaller number of cell sites.

Cellular telephony – telephony that employs mobile radiotelephones which use a network of short-range transmitters located in overlapping cells throughout a region, with a central station making connections to regular telephone lines.

EDGE technology – represents a further improvement of GPRS and allows higher speed data transmission.

Fixed-line telephony – telephony that employs a physical line, usually made out of either copper or optic fibre, to transmit voice or data, as opposed to wireless telephony which makes use of radio waves.

Fixed-wireless – refers to wireless telephony that is limited to a certain area and cannot roam between cells across a wider region.

GPRS – General Packet Radio Switching is a system that introduces more efficient packets as opposed to circuit switching onto GSM.

GSM – Global System for Mobile communications is the most popular technology standard for mobile phones worldwide and for allowing roaming between operators. Both its signalling and speech channels are digital call quality which means it is considered a second generation (2G) system.

HSDPA – High Speed Downlink Packet Access is a 3G technology allowing for higher data transfer speeds.

Interconnection rate – the cost charged by one operator for a call that originates from another operator.

ISDN – Integrated Services Digital Network is a circuit switched digital technology that allows the digital transmission of voice and data over ordinary telephone copper wires resulting in better quality and higher speeds than with analogue systems.

Killer application – the use of a technology that consumers really want and are willing to pay for.

Number portability – the ability of telecoms consumers to keep their phone number when they change service provider.

Off-net – refers to transmission on the network belonging to another operator.

On-net – refers to transmission on the network belonging to the same operator.

Prepaid services – services that are paid for before they are used rather than paid for afterwards under a normal contract.

Universal Access Obligation – the obligation for an operator to provide services to the entire population of a country or region.

VoIP – Voice over Internet Protocol, which allows voice to be transmitted over the Internet.

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