

# Better broadband performance with more competition

*The entry of the new operator Movitel into the market in 2012 has shaken up the duopoly mobile and fixed monopoly markets that delivered poor services primarily in the major cities at high prices. Assisted by the reduction in the mobile termination rates in 2012, the market has become far more competitive with mCel and Vodacom Mozambique pressured into reducing their mobile prepaid voice tariffs. On the other hand, the fixed-line market dominated by the state-owned company TDM has been unable to increase the number of subscribers. In spite of significant investments having been made to upgrade the copper-based infrastructure and to connect the country to undersea cables, retail ADSL prices still remain high in comparison to other African countries.*

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## **The entrance of Movitel shook up the mobile market**

*In 2012, when the third mobile operator Movitel became operational, the Mozambique mobile prepaid voice market experienced a significant reduction of retail mobile tariffs.*

## **Significant investments in infrastructure roll-out and upgrade**

*While Movitel has expanded network coverage to reach rural areas, both mCel and Vodacom have been increasing their investments in order not to lose their positions in the mobile market.*

## **TDM monopoly leading to a reduction of fixed-line subscribers**

*Although TDM has invested in fibre-optic infrastructure to improve broadband speeds and reduce prices, it has been losing fixed-line subscribers in the last three years, presumably some at least to mobile broadband operators.*

## **Poor broadband performance and high ADSL prices**

*Although ADSL services are cheap for 1GB basket compared to other African countries they are offered at narrowband speed of 126kbps, and become very expensive above 1Mbps speed.*

## **Opening up fixed-line market monopoly to increase performance and reduce prices**

*As already demonstrated by the mobile market, increasing facility- or service- based competition in the fixed-line market, would lead towards a reduction of retail prices and improvement of broadband speeds.*

## **Introduction**

The Mozambique market is characterised by a monopoly over fixed-lines and ADSL services controlled by TDM, a 100% state-owned company, which has been losing subscribers in the last three years and is unable to compete with mobile internet offered at a cheaper price by the three mobile operators mCel, Vodacom, and more recently Movitel.

The launch of Movitel's mobile services in 2012 put pricing pressures on the ex-duopoly telecommunications market in Mozambique which was controlled by mCel and Vodacom Mozambique. Although mobile prepaid voice prices significantly decreased in 2012 and then again in 2013, they remain high in comparison to other African markets. The high cost of communications translates into low level of mobile ownership. According to the RIA ICT Survey, only 42.5% of individuals owned a mobile phone in 2012 - less than half of the rate of many of the continent leaders.

mCel is the cheapest operator in the country with regards to mobile prepaid voice services, but on the mobile broadband market it has been overtaken by Movitel, which not only offers cheaper options but has also rolled out its infrastructure in rural areas previously untouched by mCel and Vodacom Mo-

zambique.

In order to decrease prices and improve broadband speeds, the incumbent fixed-line operator TDM is installing multiple fibre rings to ensure connectivity and network redundancy. This investment has not translated yet in a reduction of prices and improvement of speeds. TDM uncapped broadband is offered at 128kbps and therefore cannot even be considered a broadband service because it does not reach the 256kbps ITU threshold used as a speed metric to define broadband services. In addition, ADSL prices are very high, especially in speeds above 1Mbps, compared to other African countries analysed by the policy brief.

As a result, in 2012 households with working internet connection (fixed or mobile) were as low as 3.6% (RIA, 2012). The majority of them were using a mobile phone handset (68.7%), followed by 56.8% using mobile 3G dongles, 16.1% ISDN connections, 10.6% wireless broadband and only 4.5% wired ADSL.

Although tariffs decreased in 2013 as a result of mobile termination rates, off-net prices are still higher than on-net prices. Therefore, ownership of multiple SIM cards is the only option for end users to benefit from low-cost on net calls.

## Interconnection termination rates

Following a meeting held by the four operators (TDM, mCel, Vodacom and Movitel) in September 2012, the regulator INCM published resolution No. 46/2012 to set a glide path for gradually reduce interconnection termination rates between 2013 and 2015. The agreed rates, which are symmetrical among all operators, are shown in table 1 below.

	Years, and termination rates (MZN per minute)		
	2013	2014	2015
Termination on any network	1.99	1.44	0.86

Source: INCM, 2012

Departing from the rate of MZN2.5 per minute in 2012, the rate will decrease gradually to MZN0.86 per minute in 2015.

The effect of a reduction in mobile termination rates has been positive and retail mobile prepaid voice tariffs have decreased in 2013, as analysed in the following paragraph and highlighted in figure 1. However, in order to retain customers on its network, mCel off-net tariffs are higher than on-net prices. A similar strategy has been implemented by the new entrant Movitel, which has a higher off-net tariff than on-net tariff. Vodacom Mozambique has a different approach, as it has introduced the same off-net and on-net rate since Q1 2012.

## Mozambique rank in the RIA transparency price index

Research ICT Africa did not find introduction of new products in the Mozambique market in Q1 2014.

Compared to other African countries, Mozambique is placed in the middle of the index on mobile prepaid voice services, and the dominant operator mCel is the cheapest in the market.

Figure 1 compares the cost of the cheapest prepaid mobile products for each operator in Mozambique according to the OECD 40 calls/60 SMSs basket. It depicts that the main price reduction in Mozambique occurred in Q1 2012 when the new entrant Movitel became operational in the market<sup>1</sup>. The entry of the third mobile operator Movitel shook up the mobile market, leading to a significant reduction of prices.

The cost of mCel mobile prepaid products for OECD (2010) basket decreased from MZN544 in Q4 2011 to MZN450 in Q1 2012 and then it dropped again in Q2 2012 to MZN391. Its tariffs decreased again in Q2 2013 and since then mCel cost of mobile prepaid voice OECD (2010) basket has remained stable at MZN317.

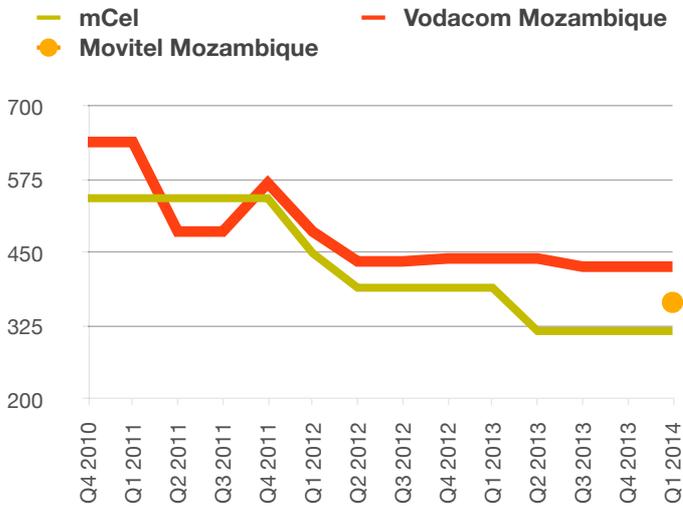
Similarly, Vodacom Mozambique, which increased its mobile tariffs in Q4 2011, lowered its OECD (2010) basket to MZN487 in Q2 2012 and then to MZN436. In Q3 2013, just one quarter after mCel reduction, Vodacom Mozambique cut its tariffs to MZN427.

**Table 2: OECD mobile baskets, 2010 definition, 40 calls. Montly call distribution, minutes and SMS**

Country name	Cheapest product				% cheaper than dominant
	dominant operator		cheapest in country		
	USD	Rank	USD	Rank	
Egypt	2.77	1	2.77	4	Dominant is the cheaper
Sudan	2.83	2	1.06	1	62.5%
Ghana	3.38	3	2.64	3	21.9%
Mauritius	3.69	4	3.69	5	Dominant is the cheaper
Ethiopia	3.98	5	3.98	6	Dominant is the cheaper
Kenya	4.27	6	1.47	2	66%
Rwanda	5.06	7	5.06	9	Dominant is the cheaper
Tunisia	6.30	8	6.10	11	3.2%
Algeria	6.43	9	6.43	14	Dominant is the cheaper
Libya	6.91	10	6.91	15	Dominant is the cheaper
Nigeria	7.11	11	4.49	7	37%
Uganda	8.53	12	7.10	16	17%
Namibia	9.21	13	8.05	17	13%
Sierra Leone	9.33	14	9.33	20	Dominant is the cheaper
Tanzania	9.60	15	6.40	13	33.3%
<b>Mozambique</b>	<b>10.01</b>	<b>16</b>	<b>10.01</b>	<b>22</b>	<b>Dominant is the cheaper</b>
Botswana	10.99	17	10.01	21	8.9%
South Africa	11.26	18	4.85	8	56.9%
Benin	11.59	19	11.59	23	Dominant is the cheaper
Cameroon	11.94	20	8.40	18	29.7%
Liberia	13.19	21	13.19	26	Dominant is the cheaper
Mauritania	13.20	22	13.20	27	Dominant is the cheaper
Central African Republic	13.91	23	13.91	28	Dominant is the cheaper
Malawi	14.15	24	14.01	30	Dominant is the cheaper
Sao Tome and Principe	14.56	25	14.56	31	Dominant is the cheaper
Congo Brazzaville	15.49	26	14.68	32	5%
Niger	15.70	27	15.70	35	Dominant is the cheaper
Burkina Faso	15.80	28	15.56	34	2%
Cote d'Ivoire	15.90	29	15.90	36	Dominant is the cheaper
Mali	16.04	30	16.04	37	Dominant is the cheaper
Senegal	16.27	31	16.27	38	Dominant is the cheaper
Togo	16.37	32	16.37	39	Dominant is the cheaper
Lesotho	16.93	33	16.93	40	Dominant is the cheaper
Zambia	16.98	34	15.11	33	11%
D.R. Congo	17.10	35	12.18	24	29%
Chad	17.76	36	17.76	42	Dominant is the cheaper
Swaziland	18.54	37	18.54	43	Dominant is the cheaper
Seychelles	20.61	38	20.61	45	Dominant is the cheaper
Madagascar	21.28	39	8.64	19	59%
Angola	22.04	40	19.84	44	10%
Zimbabwe	22.70	41	21.78	46	4%
Cape Verde	31.57	42	31.57	47	Dominant is the cheaper
Morocco	47.20	43	12.40	25	74%

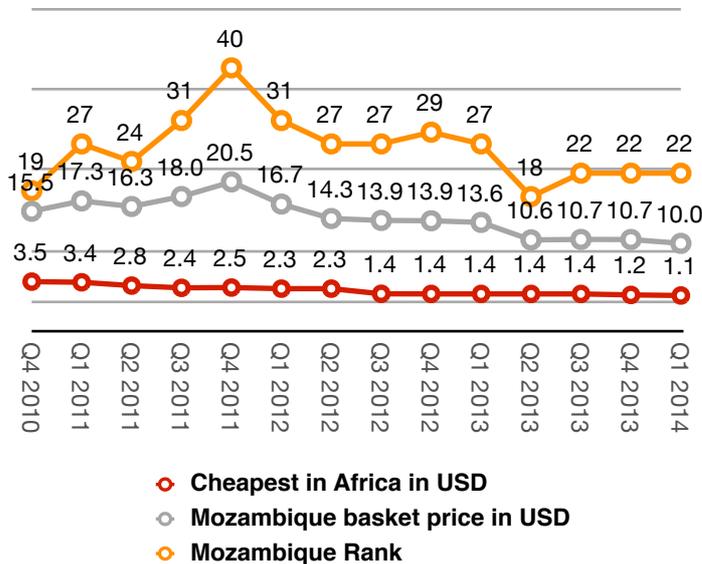
<sup>1</sup> Movitel entered the Mozambique market in 2011 but it became operational only in 2012.

Movitel Mozambique is the country's third mobile operator. Movitel prices have been collected since June 2014 because the operator website was previously off-line. Its mobile prepaid voice prices have certainly put pressure on the two operators in the market in Q1 2012 when it became operational. Currently, its cost of mobile prepaid voice OECD (2010) basket is MZN366.



**Figure 1: Cost of cheapest prepaid mobile product for OECD-40calls-60SMS basket by operators in MZN**

Figure 2 displays the cost of the cheapest prepaid mobile product available in Mozambique, and in all of Africa, for the OECD<sup>2</sup> 40 call/60 SMS basket between the fourth quarter of 2010 and the first quarter of 2014.



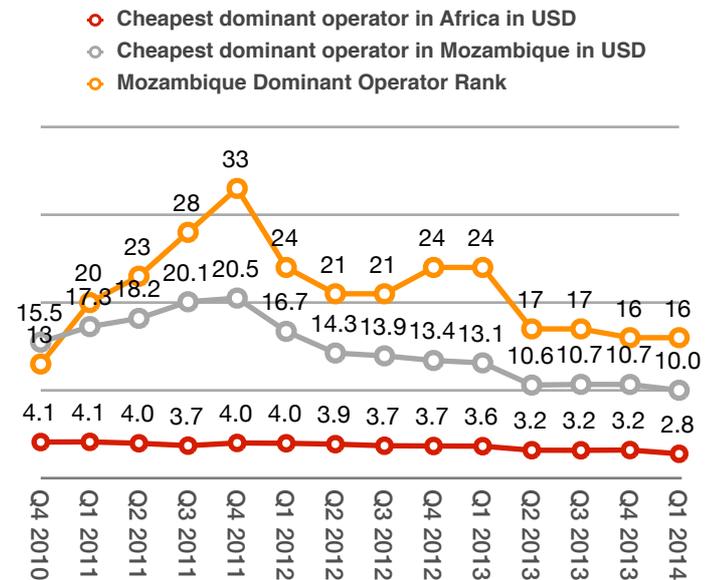
**Figure 2: Ranking and cost of cheapest prepaid mobile product available in Cameroon and Africa for OECD 40 calls and 60 SMS basket**

The OECD (2010) basket of the cheapest operator in Mozambique has been decreasing over the last three years, except in Q4 2011 where an increase occurred mostly due to MZN/USD exchange rates fluctuation and not because of an increase of the real price of prepaid mobile voice calls. In

comparison to other African countries, Mozambique sits in the middle of the mobile prepaid transparency index. Since Q3 2013 the country has reached the 22nd position when mCel introduced an m-zone tariff which cut off the cheapest mobile prepaid voice OECD (2010) basket. The cost of mobile prepaid products in Mozambique for OECD basket dropped from MZN391 (USD13.59) in Q1 2013 to MZN317 (USD10.60) in Q2 2013.

Currently, Mozambique's cheapest price basket is 9 times more expensive than the cheapest product in Africa and 3.6 times more expensive than the cheapest product available from a dominant operator in Africa (Vodafone Egypt and Zain Sudan had a basket price of USD2.8; see Table 1 or Figure 3).

Mozambique's ranking for the cheapest product available from dominant operators in the country dropped from 33rd in Q4 2011 to 24th in Q1 2012. This position moved to 17th in Q2 2013, a significant rank change for Mozambique due to the introduction of m-zone by the dominant operator mCel. The detailed ranking for all countries for the first quarter of 2014 is displayed in Table 1.

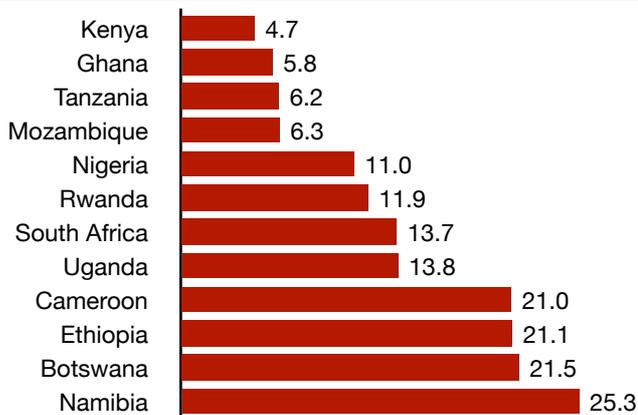


**Figure 3: Ranking and cost of cheapest prepaid mobile product available from dominant operators for OECD 40 calls and 60 SMS basket**

## Mozambique's prepaid mobile data prices

1GB mobile prepaid baskets have been used to analyse and compare data tariffs in mobile broadband markets across countries and operators in Africa. The prepaid nature compounded with a relatively low level of data volume adds to the popularity of these baskets which is represented in their provision by almost every operator. This allows for cross-cutting price comparison which is illustrated in Figure 4 and Figure 5.

<sup>2</sup> OECD (2010), Revision of the Methodology for Constructing Telecommunication Price Baskets, OECD Working Party on Communication Infrastructures and Services Policy.



**Figure 4: Cheapest prepaid 1 GB basket for Q1 2014 in USD**

The cheapest 1GB mobile prepaid basket in Mozambique costs USD6.3 and it is offered by Movitel. The recently licenced mobile operator is installing aerial fibre reaching the most remote areas of the country, previously untouched by the other mobile operators.

In comparison to other mobile prepaid data markets analysed, Mozambique is placed among the lowest data price markets. Its 1GB basket is as cheap as the same basket in Tanzania, which is characterised by a very competitive market served by seven mobile operators.

Mozambique is also cheaper than Nigeria, which has significantly reduced its prices after Smile started offering broadband services, although only in the major urban areas.

## Fixed broadband

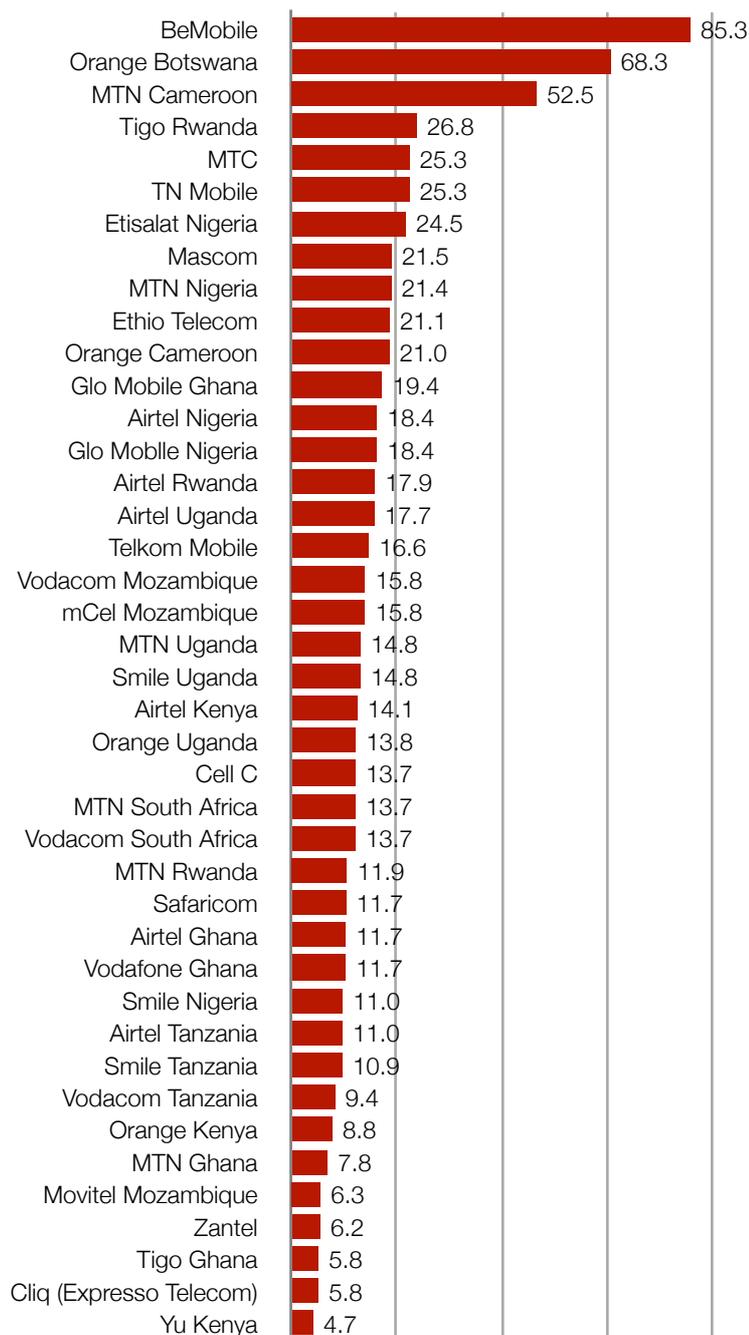
**Table 3: Cost of 1GB ADSL baskets at different speeds**

Country	Operator	1GB up to 1 Mbps	1GB up to 4 Mbps	1GB up to 10 Mbps	1GB above 10 Mbps
Ethiopia	Ethio Telecom	14.45	30.25	337.90	
Mozambique	TDM	21.59	91.10	136.91	
Ghana	Vodafone	26.89			
Namibia	Telecom Namibia	36.74	64.36	336.69	
South Africa	Telkom	37.68	37.68	68.53	86.18
Botswana	BTC	46.97	61.81	119.63	
Cameroon	Camtel	62.81	1002.06		
Tanzania	TTCL	71.74			
Kenya	Orange	77.04	124.02		

Table 3 compares the incumbent state-owned operator TDM with other ADSL operators in Africa.

TDM is one of the cheapest ADSL provider in the 1GB basket up to 1Mbps speed. Among the countries analysed, the operator is more expensive only after Ethio Telecom, whose prices have been politically set due to the monopolistic nature of the operator. However, TDM is more expensive in the 1GB up to 4Mbps basket. In that case, the basket is three times more expensive than the cheapest one and its prices are above other expensive markets such as Botswana.

TDM uncapped package is offered at 128kbps and therefore it has not reached the ITU threshold speeds of 256kbps which is used in the definition of broadband speed.



**Figure 5: Q1 2014 Price 1GB basket in USD.**

## Investment and subscribers

Although the Mozambique regulatory framework makes provision for the liberalisation of the sector, TDM is entirely state owned and maintains a monopoly over fixed-line infrastructure and there is not a strong wholesale access or reseller regime. The incumbent reported substantial investments especially in 2010, which focused on digitalisation of the public switch telephone network (PSTN) and replacement of copper and microwave-based network infrastructure with fibre-optic systems. However, their investments are not reflected in their advertised speeds. In addition, contrary to the expansion of the mobile broadband market, the fixed-line

market decreased in size in 2011, and then again in 2012 and in 2013.

Meanwhile, Vodacom, mCel, and recently Movitel, have significantly increased their investments in the last three years in an effort on expanding network coverage and improving broadband performance by introducing new mobile technologies such as 3G.

In 2012, the three mobile operators reached a total of 8,805million subscribers. Until the end of 2011, the mobile market was shared between mCel and Vodacom. With the entrance of Movitel in 2012, which reported 1,250million subscribers at the end of its first year of operation, the market experienced a significant reduction in retail mobile voice tariffs.

## Conclusion

The mobile sector in Mozambique has experienced lower prices, better voice and data coverage since 2012, when the third operator Movitel became operational. The fixed-line market, instead is still characterised by a monopoly, although provision for the liberalisation of the market is already in the policy and regulatory framework. The state-owned incumbent has not been able to increase the number of fixed-lines and has struggled to reduce ADSL prices. This results in ADSL prices being higher than most other African markets analysed by this policy brief and at a very low speed, especially uncapped packages.

Overall, the cost of internet access, especially ADSL has not been as low as it was predicted when Mozambique's linkages to wholesale bandwidth via SEACOM and EASSy international undersea cables came into operation and significant investment in fibre-optic infrastructure were made. The key reason for high prices is that despite significant developments in wholesale access, there is no competition on the retail side due to the monopoly maintained by TDM over the fixed-line infrastructure.

Allowing new entrants and investors in the fixed-line market would certainly improve the performance of the market, including an increase of fixed-line and ADSL subscribers and broadband performance.

## Reference

Research ICT Africa (2012) ICT Survey data 2011-12. Available at [info@researchictafrica.net](mailto:info@researchictafrica.net).

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**Table 5: Financial data from TDM, Vodacom, mCel and Movitel**

		2010	2011	2012	2013
Subscribers	TDM	88,062	88,120	87,984	84,998
	Vodacom (million)			2,894	
	mCel (million)			4,886	
	Movitel (million)			1,250	
Traffic (Millions of minutes)	TDM	92,957	117,849	78,728	
	Vodacom	228,400	1,241,962	3,185,22	
	mCel	814,607	3,583,827	4,246,53	
Investments (USD millions)	TDM	218,222	27,464	41,881	
	Vodacom	57,988	77,305	73,882	
	mCel	39,894	58,823	60,782	
	Movitel		199,000	51,000	

Source: INCM 2012, 2013

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